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# ANNUAL REPORT

OF THE

# STREET DEPARTMENT

FOR THE

YEAR 1910

COMPLIMENTS OF . . .

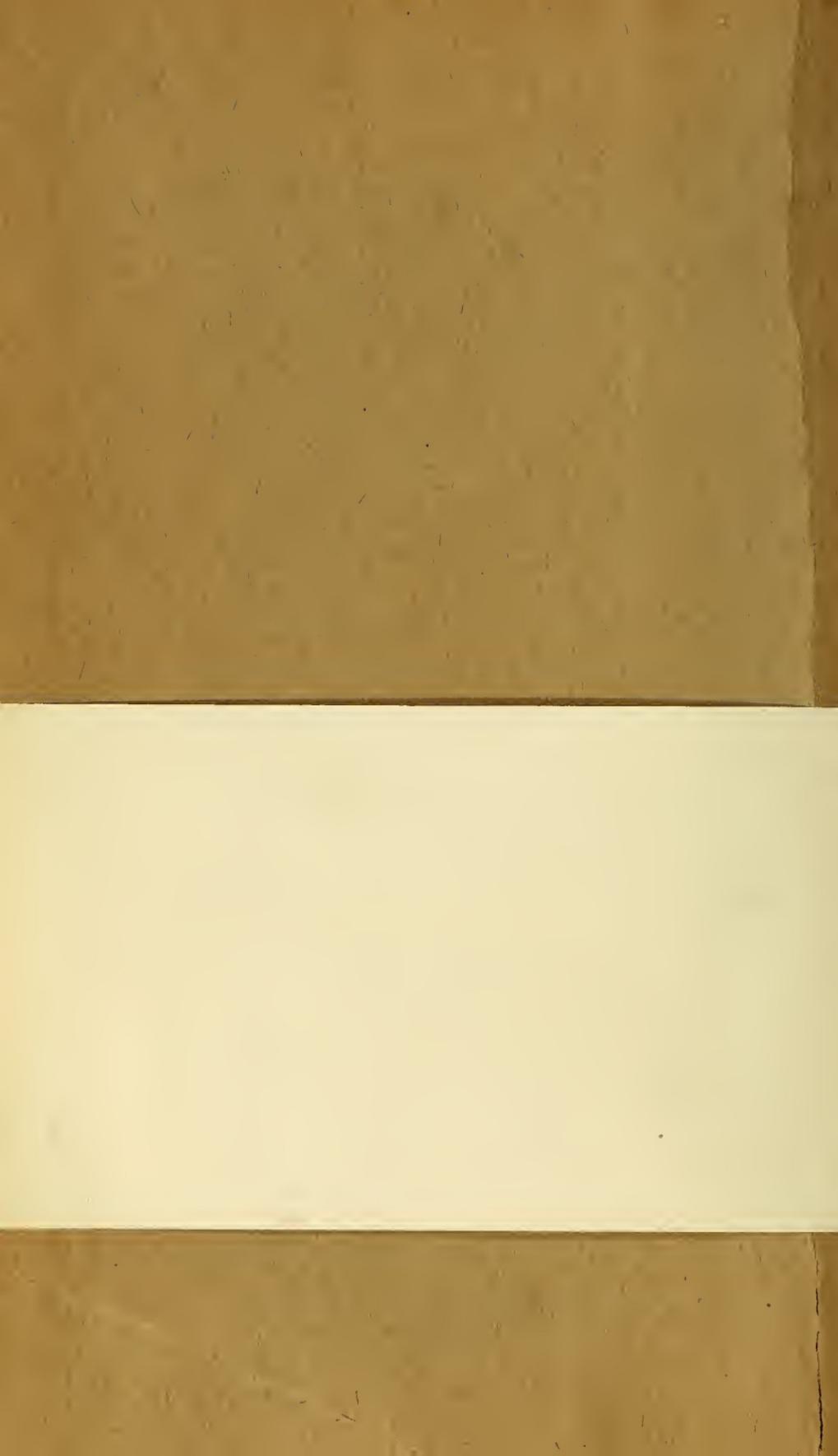
L. K. ROURKE,

Superintendent of Streets.

PLEASE EXCHANGE.

CITY OF BOSTON  
PRINTING DEPARTMENT  
1911

717



# ANNUAL REPORT

OF THE

# STREET DEPARTMENT

FOR THE

YEAR 1910



CITY OF BOSTON  
PRINTING DEPARTMENT

1911

717

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cont

Boston Street Department  
Jan. 1, 1917

1910

• УРАГАНИЕ  
ЭНТ №  
МОГСОВЪУТИО

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ANNUAL REPORT  
OF THE  
STREET DEPARTMENT  
FOR THE  
YEAR ENDING JANUARY 31, 1911.

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BOSTON, March 10, 1911.

HON. JOHN F. FITZGERALD,  
*Mayor of the City of Boston:*

SIR,— In compliance with the Revised Ordinances, the annual report of the operations and expenses of the Street Department for the year ending January 31, 1911, is herewith respectfully submitted.

ORGANIZATION.

The work of the department has been carried on during the year according to the provisions of chapter 3 of the Ordinances of 1908 with five subdivisions as follows:

Central Office.	Sanitary Division.
Ferry Division.	Sewer Division.
Highway Division.	Boston and Cambridge Bridges.
Lamp Division.	

NOTE.— The Boston and Cambridge Bridges Division so called is not properly a division of the Street Department, as this work is in charge of a commission of two, one member appointed by the Mayor of Boston and the other by the Mayor of Cambridge, under the provisions of chapter 412 of the Acts of 1904; but on account of the fact that the present Superintendent of Streets is the Boston member of this commission and also because one-half of the expenses of this commission is defrayed by the Highway Division of this department, it is here treated as a division of this department.

#### APPROPRIATIONS.

The money assigned for the work of the Street Department during the year was made available from the following sources:

*First.*— Maintenance appropriation, derived from the income of the city raised by taxation. Before the commencement of each financial year, February 1, the department estimates of the amounts necessary for the proper maintenance of the various divisions are submitted to the Mayor, who makes such recommendations as he may deem proper to the City Council. The maintenance appropriations, including permanent construction, as passed by the City Council and approved by the Mayor, were as follows:

Central Office . . . . .	\$22,768 00
Ferry Division . . . . .	235,250 00
Highway Division . . . . .	1,500,000 00
Lamp Division . . . . .	730,000 00
Sanitary Division . . . . .	1,280,000 00
Sewer Division . . . . .	310,000 00
Boston and Cambridge Bridges . . . . .	*

*Second.*— Loan inside the debt limit for building new streets assessable on abutting property, authorized by chapter 393 of the Acts of 1906. (Highway Division.)

Amount expended during the year . . . . .	<u>\$186,655 99</u>
---	---------------------

*Third.*— Loan inside the debt limit under the provisions of chapter 426 of the Acts of 1897, as amended

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\* Paid by Highway Division.

by chapter 204 of the Acts of 1908, from which all sewerage works are built, except those in the Charles River Basin watershed. (Sewer Division.)

Balance February 1, 1910 . . . . .	\$27,130 04
Loan . . . . .	300,000 00
<hr/>	
Total . . . . .	\$327,130 04
Expended during the year . . . . .	220,966 39
<hr/>	
Balance February 1, 1911 . . . . .	\$106,163 65

*Fourth.*— Loan under the provisions of chapter 383 of the Acts of 1903, as amended by chapter 485 of the Acts of 1907, and by chapter 514 of the Acts of 1908, authorizing the expenditure in each of the years from 1908 to 1912, inclusive, of one-twentieth of one per cent of the city's taxable valuation on the separate system of drainage. (Sewer Division.)

Balance February 1, 1910 . . . . .	\$313,461 14
Loan . . . . .	674,000 00
<hr/>	
Total . . . . .	\$987,461 14
Expended during the year . . . . .	742,142 79
<hr/>	
Balance February 1, 1911 . . . . .	\$245,318 35

#### GENERAL REMARKS.

During the year the department has been conducted along the same lines which I found in operation when I assumed charge on June 8, 1910. About the same number of employees have been retained in the service. The contract work has been satisfactory, both as to quality and price.

Attached are reports in detail, of the work accomplished and the cost thereof, of the various subdivisions of the Street Department.

#### FERRY DIVISION.

Appropriation and revenue . . . . .	\$235,250 00
Transferred from Highway Division . . . . .	670 63
<hr/>	
Total . . . . .	\$235,920 63
Expended during the year . . . . .	\$235,920 63

## HIGHWAY DIVISION.

Appropriation and revenue . . . . .	\$1,524,091 54
<u>Expenditures:</u>	
Bridge Service . . . . .	\$201,995 00
Boston and Cambridge Bridges . . . . .	22,006 57
Paving Service . . . . .	1,261,128 72
	—————
	1,485,130 29
<u>Unexpended balance . . . . .</u>	
Transferred to Central Office, . . . . .	\$859 76
Transferred to Ferry Division, . . . . .	670 63
	—————
	\$38,961 25
<u>Unexpended balance . . . . .</u>	
Transferred to city treasury . . . . .	\$1,530 39
	—————
	\$37,430 86
	<u>\$37,430 86</u>

## LAMP DIVISION.

Appropriation and revenue . . . . .	\$730,000 00
Expenditures . . . . .	710,294 84
	—————
Unexpended balance . . . . .	\$19,705 16
Transferred to city treasury . . . . .	<u>\$19,705 16</u>

## SANITARY DIVISION.

Appropriation and revenue . . . . .	\$1,309,963 82
<u>Expenditures:</u>	
Sanitary Service . . . . .	\$725,202 57
Street Cleaning and Watering Service . . . . .	559,235 20
	—————
	1,284,437 77
<u>Unexpended balance . . . . .</u>	
Transferred to city treasury . . . . .	\$25,526 05
	<u>\$25,526 05</u>

## SEWER DIVISION.

Appropriation and revenue . . . . .	\$313,916 10
Expenditures . . . . .	312,541 05
	—————
Unexpended balance . . . . .	\$1,375 05
Transferred to city treasury . . . . .	<u>\$1,375 05</u>

## SEWERAGE WORKS.

Balance February 1, 1910 . . . . .	\$27,130 04
Loan . . . . .	300,000 00
	<hr/>
	\$327,130 04
Expenditures . . . . .	220,966 39
	<hr/>
Unexpended balance . . . . .	\$106,163 65

## SEPARATE SYSTEMS OF DRAINAGE.

Balance February 1, 1910 . . . . .	\$313,461 14
Loan . . . . .	674,000 00
	<hr/>
	\$987,461 14
Expenditures . . . . .	742,142 79
	<hr/>
Unexpended balance . . . . .	\$245,318 35

## PERMITS.

By chapter 571 of the Acts of 1910, the department was authorized to collect fees for permits. A copy of this act follows:

AN ACT TO AUTHORIZE THE COLLECTION OF FEES FOR PERMITS AND LICENSES ISSUED BY DEPARTMENTS OF THE CITY OF BOSTON.

*Be it enacted, etc., as follows:*

SECTION 1. The heads of the various departments of the city of Boston may establish, subject to the approval of the mayor, reasonable fees or charges for the issuance of permits and licenses by said departments: *provided, however,* that the charge for a permit to make excavations in any street or sidewalk shall not exceed fifty cents.

SECT. 2. The authority given in the preceding section shall not deprive any of the officials named in section twenty-eight of chapter four hundred and eighty-six of the acts of the year nineteen hundred and nine of any authority given therein to fix the charges for permits and licenses.

SECT. 3. This act shall take effect upon its passage.

Acting under this authority, a schedule of prices for the different kinds of permits issued from the Permit Office was adopted, a copy of which follows:

## SCHEDULE OF PRICES.

## CITY OF BOSTON.—STREET DEPARTMENT.

*Notice to Corporations, Contractors and Others. (In Accordance with Chapter 571 of the Acts of 1910.)*

On and after July 15, 1910, a charge will be made for each permit issued from the Permit Office of this department in accordance with the following schedule:

1. Openings in streets or sidewalks, 50 cents each. Limited to 100 linear feet on one permit.
2. Emergency permits, Class A (for the above purpose), 50 cents each.
3. Advertising by man wearing hat and coat lettered (annual permit), \$5 (or \$1 per month).
4. Cleaning snow from roofs (occupation of sidewalk and street while so doing), annual permit \$1 each.
5. Driving cattle through the streets (annual permit to driver), \$5.
6. Dumping snow from private property into public alleys (annual permit), 50 cents.
7. Erecting and repairing awnings (annual permit), 50 cents.
8. Erecting, altering or repairing buildings (occupation of street or sidewalk), 1 cent per square foot per month up to 5,000 feet, and  $\frac{1}{2}$  cent per foot per month in excess of 5,000 feet; the minimum charge to be at one month rate.
9. Painting or minor repairs, 50 cents each.
10. Feeding horses on streets (annual permit), \$1 each.
11. Moving buildings in streets, \$5 per day; minimum charge, \$10.
12. Painting signs or notices on obstruction fences, \$1 each.
13. Placing, and removing, signs flat on buildings, 50 cents each.
14. Projecting signs or lamps from buildings, \$1 each.
15. Raising or lowering safes, machinery, etc., \$1 each.
16. Loading and unloading goods (annual permit), charges to be based on conditions at each location. Minimum, \$1; maximum, \$5.
17. Emergency permits (Class B), \$1 each.
18. Special permits for other than above purposes, 25 cents each.
19. Annual permits at rates other than those in the preceding classes, when in the opinion of the Superintendent of Streets such permits are requisite to the proper conduct of the permit system.

All extensions will be considered renewals and the charge collected as for a new permit.

L. K. ROURKE,  
Superintendent of Streets.

July 12, 1910.

The object of this schedule was to restrict, as much as possible, any unnecessary occupation of the streets and incidentally reduce the expense of the Permit Office. For the first month or so there was more or less objection by applicants for permits, but when the matter was explained they realized that it was not intended as a burden or imposition. Many attempts were made to evade payment and it became necessary to assist the Police Department in prosecuting a few of the most flagrant offenders and to establish a system of inspection of occupations for building operations.

The income from this source amounted to \$14,259.96, divided as follows:

Class No. 1								\$3,653 40
2	.	.	.	.	.	.		291 00
3	.	.	.	.	.	.		21 00
4	.	.	.	.	.	.		65 00
5	.	.	.	.	.	.		31 00
6	.	.	.	.	.	.		33 00
7	.	.	.	.	.	.		116 00
8	.	.	.	.	.	.		6,249 81
9	.	.	.	.	.	.		1,376 00
10	.	.	.	.	.	.		923 00
11	.	.	.	.	.	.		65 00
12	.	.	.	.	.	.		6 00
13	.	.	.	.	.	.		459 50
14	.	.	.	.	.	.		155 00
15	.	.	.	.	.	.		180 00
16	.	.	.	.	.	.		117 00
17	.	.	.	.	.	.		177 00
18	.	.	.	.	.	.		119 25
19	.	.	.	.	.	.		222 00
								<hr/> <u>*\$14,259 96</u>

If this rate of income can be maintained it will pay the actual cost of issuing permits and will cover a part of the cost of the inspection.

Undoubtedly the greatest benefit to the citizens is the reduction of occupation of sidewalk and roadway by persons building, altering or repairing buildings. It has been customary for an applicant for a permit to insist that he needed the entire sidewalk and at least six feet of the roadway along the front of his property. Under

the schedule, as adopted, the same applicants ask for only enough space to allow them to transport material across the sidewalk into the property, for exactly similar operations. Even in so small an operation as on a frontage of twenty-five feet the occupation would formerly reach at least three hundred and fifty feet; now it is confined to fifty square feet for a temporary driveway, a three hundred foot saving to the public. Where an operation entailing the erection of several buildings is concerned the reduction of public inconvenience is plainly of considerable importance.

Many of the older streets throughout the city are in great need of entire renumbering and several hundred in need of partial renumbering. Some of these streets were built with dwellings and the spread of business has changed them into stores and office buildings. In these cases the original numbering had to be changed, as not enough numbers were assigned to the dwellings to provide for additional entrances. This necessitates dividing a number into parts, as No. 22, 22A, 22B, 22C. This is not only a source of inconvenience to the occupant but to the general public.

Considerable difficulty exists in the handling of the number thirteen. For a number of years this number has not been used in numbering streets, and whenever possible, without causing trouble to property owners, existing thirteens have been replaced. There is extreme objection to the number on account of superstition. Owners, tenants and dealers state positively that buildings so numbered do not sell or rent as readily as under another number. Where this number exists and the owner requests a change, he is assigned 11A in cases where the buildings next his are properly numbered eleven and fifteen. This causes inconvenience to the tenant or owner of number eleven who feels that he is imposed upon.

Several times in the past attempts have been made to properly number a certain street in the business section and each attempt has produced strenuous opposition on the basis that certain business houses have built up their business on the number of their building. This has apparently been the honest belief of the protesting party but it is questionable if their business would be damaged in the slightest degree by a change of number. Mail would not be delayed, nor

would purchasers be annoyed to an appreciable extent. It is doubtful if, after a notice of reasonable length had been given, the changes were made there would be a noticeable effect on business. Probably the opposition is almost entirely due to a lack of public spirit and consideration for general convenience.

In other cases where the entire renumbering of a street has become necessary, the opposition comes from the fact that the building number of some house that had a questionable reputation in the past might be assigned to one of respectability. Perhaps this is really a better objection than in the case of the business man, but it is questionable if it is of sufficient weight to counterbalance the need of renumbering.

The expenditures under the several appropriations for the year 1910 were as follows:

Maintenance . . . . .	\$4,051,952	34
Highways, making of . . . . .	186,655	99
Separate systems of drainage . . . . .	742,142	79
Sewerage works . . . . .	220,966	39
Bridge specials . . . . .	79,064	68
Paving specials . . . . .	31,204	93
	<hr/>	
	\$5,311,987	12

#### Recapitulation of Expenditures for the Twelve Months, Ending January 31, 1911.

OBJECT OF APPROPRIATION.	Current Expenses.	Special Appropriations.	Total.
Street Department:			
Central Office.....	\$23,627 76	.....	\$23,627 76
Ferry Division.....	235,920 63	.....	235,920 63
Highway Division.....	1,485,130 29	\$110,269 61	1,595,399 90
Lamp Division.....	710,294 84	.....	710,294 84
Sanitary Division.....	1,284,437 77	.....	1,284,437 77
Sewer Division.....	312,541 05	963,109 18	1,275,650 23
Highway, making of.....	.....	186,655 99	186,655 99
Totals.....	\$4,051,952 34	\$1,260,034 78	\$5,311,987 12

**Financial Statement of the Street Department Appropriation,  
February 1, 1910, to January 31, 1911.  
Maintenance.**

APPROPRIATION.	Appropriations and Transfers during 1910-11.	Revenue.	Total Credits.	Expenditures for the twelve months ending January 31, 1911.	Balances of Divisions, January 31, 1911.
Street Department:					
Central Office.....	<sup>1</sup> \$22,768 00	.....	\$23,627 76	\$23,627 76	
Ferry Division.....	<sup>2</sup> 235,250 00	.....	235,920 63	235,920 63	
Highway Division.....	<sup>3</sup> 1,500,000 00	\$24,091 54	1,522,561 15	1,485,130 29	\$37,430 86
Lamp Division.....	<sup>4</sup> 730,000 00	.....	730,000 00	710,294 84	19,705 16
Sanitary Division.....	<sup>5</sup> 1,280,000 00	29,963 82	1,309,963 82	1,284,437 77	25,526 05
Sewer Division.....	<sup>6</sup> 310,000 00	3,916 10	313,916 10	312,541 05	1,375 05
Totals.....	\$4,078,018 00	\$57,971 46	\$4,135,989 46	\$4,051,952 34	\$84,037 12
<sup>1</sup> Appropriation Transferred from Highway Division				\$22,768 00 859 76	<u>\$23,627 76</u>
<sup>2</sup> Appropriation Transferred from Highway Division				\$235,250 00 670 63	<u>\$235,920 63</u>
<sup>3</sup> Appropriation . . . . .				\$1,500,000 00 24,091 54	
Revenue				859 76	
Transferred to Central Office				670 63	
Transferred to Ferry Division				37,430 86	
Transferred to city treasury					<u>\$1,485,130 29</u>
<sup>4</sup> Appropriation . . . . .				\$730,000 00 19,705 16	
Transferred to city treasury					<u>\$710,294 84</u>
<sup>5</sup> Appropriation . . . . .				\$1,280,000 00 29,963 82	
Revenue				25,526 05	
Transferred to city treasury					<u>\$1,284,437 77</u>
<sup>6</sup> Appropriation . . . . .				\$310,000 00 3,916 10	
Revenue				1,375 05	
Transferred to city treasury					<u>\$312,541 05</u>



**Comparative Table Showing Cost of Maintenance of the Street Department Since 1899.**

DIVISION.	1899-1900.	1900-01.	1901-02.	1902-03.	1903-04.	1904-05.	1905-06.	1906-07.	1907-08.	1908-09.	1909-10.	1910-11.
Central Office.....	\$18,799 41	\$19,994 66	\$24,999 83	\$20,386 04	\$21,092 06	\$20,853 21	\$21,902 91	\$188,235 55	\$199,342 12	\$180,273 01	\$22,518 63	\$23,627 76
Bridge.....	120,408 72	138,580 56	170,866 18	164,082 13	171,789 52	185,269 84	184,564 54				198,552 71	201,995 00
Boston and Cambridge Bridges.....	15,998 18	17,353 27	18,394 97	16,400 04	16,715 12	16,263 90	20,878 84	11,609 64	11,230 57	18,524 29	18,464 72	22,006 57
Ferry.....	211,822 87	236,999 91	248,754 06	227,688 29	254,535 23	254,535 20	273,995 90	265,463 83	294,357 82	249,068 39	222,101 10	235,920 63
Lamp.....								826,804 01	840,016 93	809,510 06	719,574 91	710,294 84
Paving.....	705,432 68	753,562 34	837,831 07	780,236 39	785,946 38	808,604 99	874,636 88	860,246 89	831,113 67	775,838 06	1,089,247 94	1,178,546 90
Removal of snow.....	154,625 18	29,138 33	93,518 45	121,899 66	114,395 94	264,840 43	137,115 89	77,023 96	144,117 96	58,143 37	131,357 56	112,623 21
Sanitary.....	567,107 81	609,664 67	623,000 50	675,319 64	654,975 87	706,529 89	703,382 08	767,859 76	790,243 78	745,200 90	637,255 93	723,249 64
Sewer.....	347,133 64	362,060 24	345,669 05	301,743 69	288,679 26	324,360 72	381,687 78	374,075 92	402,389 90	351,162 41	301,145 94	312,541 05
Street Cleaning.....	322,951 15	339,747 23	356,445 72	392,802 09	403,626 11	434,172 62	448,837 79	465,005 94	501,688 67	419,275 91	353,550 33	370,602 81
Street Watering.....	174,625 97	174,742 45	164,259 36	160,147 25	164,104 74	165,071 08	189,347 50	153,423 07	152,235 45	154,679 90	170,728 75	160,543 93
Totals.....	\$2,638,905 61	\$2,681,843 71	\$2,883,739 19	\$2,860,705 22	\$2,875,850 23	\$3,184,092 88	\$3,236,350 11	\$3,989,748 57	\$4,166,736 87	\$3,761,676 30	\$3,864,798 52	\$4,051,952 34

**Hired Team Contracts.**

DISTRICT.	Awarded to	Dated.	Single, per day.	Double, per day.	Extra Men, per day.	From	To	Paving Division.	Sanitary Division.	Sewer Division.	Street Cleaning Division.	Total.
No. 1. South Boston and Dorchester North <sup>1</sup> .....	John J. Loonie.....	Feb. 4, 1910	\$3 00	\$5 00	\$2 00	Feb. 1, 1910	Jan. 31, 1911	\$3,935 65	\$4,169 15	\$46 00	\$1,374 00	\$9,524 80
No. 2. East Boston <sup>2</sup> .....	Bernard E. Grant.....	Feb. 4, 1910	3 05	4 75	1 80	Feb. 1, 1910	Jan. 31, 1911	2,632 10	130 63			2,762 73
No. 3. Charlestown <sup>2</sup> .....	Bernard E. Grant.....	Feb. 4, 1910	3 05	4 75	1 80	Feb. 1, 1910	Jan. 31, 1911	551 75	640 21	90 25	1,497 56	2,779 77
No. 4. Brighton <sup>3</sup> .....	Joseph McGreevey.....	Feb. 4, 1910	3 00	5 00	2 00	Feb. 1, 1910	Jan. 31, 1911	192 50	3,021 00	890 00		4,103 50
No. 5. West Roxbury <sup>3</sup> .....	George H. Noone.....	Feb. 4, 1910	3 00	4 90	2 00	Feb. 1, 1910	Jan. 31, 1911	2,982 15	440 00	347 90		3,770 05
Nos. 6-9. Dorchester and Ashmont <sup>4</sup> .....	John H. Winsloe.....	Feb. 4, 1910	2 98	4 42	2 00	Feb. 1, 1910	Jan. 31, 1911	9,733 51	17,203 26	3,358 65		30,295 42
No. 7. Roxbury South and Jamaica Plain <sup>4</sup> .....	George H. Noone.....	Feb. 4, 1910	3 00	4 90	2 00	Feb. 1, 1910	Jan. 31, 1911	7,380 30	2,327 50	291 15	1,372 70	11,371 65
No. 8. South End and Roxbury North <sup>5</sup> .....	Joseph Sprissler.....	Feb. 4, 1910	3 25	4 85	2 00	Feb. 1, 1910	Jan. 31, 1911	8,564 07	4,389 77	2,133 06	3,588 86	18,675 76
No. 10. North and West Ends and Back Bay <sup>1</sup> .....	Bernard E. Grant.....	Feb. 4, 1910	3 00	4 50	1 80	Feb. 1, 1910	Jan. 31, 1911	1,987 50	1,459 63	1,991 25	4,698 70	10,137 08

<sup>1</sup> Advertised and awarded to lowest bidder.

<sup>2</sup> Advertised and awarded to lowest bidder on doubles and second lowest bidder on singles.

<sup>3</sup> Advertised and awarded to second lowest bidder on doubles and lowest bidder on singles.

<sup>4</sup> Advertised and awarded to third lowest bidder on doubles and lowest bidder on singles.

<sup>5</sup> Advertised and awarded to second lowest bidder on doubles and fifth lowest bidder on singles.

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## Summary of Volume and Cost of Snow Removed, Year Ending January 31, 1911.

WORK DONE BY	Districts.	TEAMS.		TOTAL TEAMS.		Cubic Yards.	Total Cubic Yards.	Cost.	Total Cost.	Cost per Cubic Yard.	Total Cost per Cubic Yard.
		Single.	Double.	Single.	Double.						
		Not Including Paving Division Day Work.									
Paving Division, day work.....	South Boston.....	656	1,080	.....	.....	4,224	.....	\$8,806 05	.....	.....	.....
	East Boston.....	733	44	.....	.....	1,232	.....	4,192 64	.....	.....	.....
	Charlestown.....	900	364	.....	.....	2,442	.....	5,781 34	.....	.....	.....
	Brighton.....	365	155	.....	.....	1,012	.....	4,008 30	.....	.....	.....
	West Roxbury.....	3,656	685	.....	.....	7,539	.....	7,655 95	.....	.....	.....
	Dorchester.....	184	144	.....	.....	708	.....	4,089 09	.....	.....	.....
	Roxbury.....	903	155	.....	.....	1,820	.....	11,475 84	.....	.....	.....
	South End.....	784	1,179	.....	.....	4,713	.....	13,389 61	.....	.....	.....
	Ashmont.....	166	98	.....	.....	543	.....	2,817 87	.....	.....	.....
	North End.....	1,271	931	.....	.....	4,699	.....	11,842 71	.....	.....	.....
Paving Division, contracts.....				1 9,618	2 4,835		28,932		3 \$74,147 40		
	Snow District No. 1.....	1,494	.....	.....	.....	4,479	.....	4 \$1,365 39	.....	.....	\$0 30
	Snow District No. 2.....	610	.....	.....	.....	1,865	.....	5 647 91	.....	.....	35
	Snow District No. 3.....	628	.....	.....	.....	1,911	.....	6 698 82	.....	.....	37
	Snow District No. 4.....	987	.....	.....	.....	3,490	.....	7 1,465 80	.....	.....	42
	Snow District No. 5.....	98	.....	.....	.....	307	.....	110 52	.....	.....	36
	Snow District No. 6.....	227	.....	.....	.....	680	.....	265 20	.....	.....	39
				.....	4,044		12,732	.....	\$4,553 04	.....	\$0 358
	No. 1.....	1,372	.....	.....	.....	3,046	.....	\$1,600 41	.....	.....	\$0 52
	No. 2.....	1,878	.....	.....	.....	4,169	.....	318 78	.....	.....	07
Sanitary Division, Street Cleaning Section, day work.....	No. 3.....	1,051	.....	.....	.....	2,333	.....	773 68	.....	.....	33
	No. 6.....	207	.....	.....	.....	460	.....	301 88	.....	.....	66
	No. 7.....	473	.....	.....	.....	1,050	.....	925 75	.....	.....	88
	No. 8.....	4,754	.....	.....	.....	10,554	.....	7,016 15	.....	.....	66
	No. 9.....	1,000	.....	.....	.....	2,220	.....	936 13	.....	.....	42
	No. 10.....	6,020	.....	.....	.....	14,148	.....	7,147 96	.....	.....	51
	No. 11.....	5,028	.....	.....	.....	12,031	.....	4,649 28	.....	.....	39
				8 21,783	.....		50,011	.....	9 23,770 02	.....	475
	Totals Exclusive of Paving Division day work.....	.....	.....	21,783	4,044	.....	62,743	.....	\$28,323 66	.....	\$0 451
	Inclusive of Paving Division day work.....	.....	.....	31,401	8,879	.....	91,675	.....	102,471 06	.....	.....

<sup>1</sup> Single load, 1½ cubic yards.<sup>2</sup> Double loads, 3 cubic yards.<sup>3</sup> Includes cost of plowing gutters, cleaning sidewalks and picking ice not carted away.<sup>4</sup> Includes 3,648 cubic yards at 29 cents (\$1,057.92), removed under 1909 contract.<sup>5</sup> Includes 1,623 cubic yards at 35 cents (\$568.05), removed under 1909 contract.<sup>6</sup> Includes 1,746 cubic yards at 37 cents (\$646.02), removed under 1909 contract.<sup>7</sup> 1909 contract.<sup>8</sup> Includes 17,316 loads, Street Cleaning Section, at 2.22 cubic yards, and 4,467 loads, Sanitary

Section, at 2.59 cubic yards.

<sup>9</sup> Includes Sunday and other work paid for at time and one-half.



The following tables show the snowfall and rainfall since 1904:

Snowfall (inches).

MONTH.	1904-05.	1905-06.	1906-07.	1907-08.	1908-09.	1909-10.	1910-11.
November.....			1.1				1.4
December.....	12.0	3.5	15.5	7.0	3.5	12.3	8.1
January.....	21.3	6.1	16.1	4.8	11.2	11.9	0.7
February.....	8.0	6.1	25.5	9.3	2.3	12.6	19.5
March.....	3.6	21.9	6.6	4.8	3.1	0.2	
April.....				0.8			
Totals.....	44.9	37.6	64.8	26.2	20.1	37.0	29.7

Rainfall (inches).

MONTH.	1904.	1905.	1906.	1907.	1908.	1909.	1910.
January.....	4.80	4.09	2.96	2.54	2.47	3.94	4.25
February.....	2.49	1.59	2.66	1.88	2.96	4.71	3.44
March.....	2.43	2.25	5.45	1.66	2.97	3.28	1.25
April.....	9.14	2.14	2.15	3.31	1.70	3.92	2.22
May.....	3.38	1.47	4.91	3.12	3.78	2.33	1.02
June.....	2.06	5.23	2.57	2.56	1.08	4.45	4.89
July.....	1.23	1.00	5.38	1.09	3.17	0.97	1.15
August.....	2.19	3.39	1.58	1.10	4.35	3.55	0.98
September.....	5.57	5.10	2.64	7.43	0.68	5.15	2.14
October.....	2.13	0.82	3.88	2.54	3.70	1.07	1.14
November.....	1.70	1.77	2.55	6.02	0.74	4.11	3.75
December.....	2.52	3.23	3.96	4.31	2.47	3.19	2.10
Totals.....	39.64	32.08	40.60	37.56	30.07	40.67	28.33

In this rainfall is included the precipitation during the winter months, which equals one-tenth of an inch to one inch of snowfall.

The Following Table Shows the Area of Pavement in Square Yards by Districts.

DISTRICT.	Asphalt.	Granite Block.	Wood Block.	Plank on Bridges.	Brick.	Cobble.	Bitulithic.	Macadam.	Gravel.	Not Graded.	Totals.
Year 1909 report.....	333,954	2,218,311	55,807	41,000	22,419	2,239	115,138	6,436,823	479,465	145,623	9,890,779
February 1, 1911.											
City Proper.....	249,274	950,332	47,993	11,469	5,574	1,342	71,277	609,939	172	1,551	1,948,923
Charlestown.....	5,284	260,894	.....	4,035	756	.....	.....	171,175	275	.....	442,419
East Boston.....	1,925	135,517	.....	2,685	251	897	620	463,908	17,307	503	623,613
South Boston.....	24,595	414,621	.....	8,462	1,650	.....	17,784	382,800	18,156	74,776	942,844
Roxbury.....	53,107	291,206	8,267	1,417	49,808	.....	25,374	1,104,718	41,083	5,416	1,580,396
West Roxbury.....	.....	40,058	.....	2,181	.....	.....	.....	1,297,845	81,395	18,472	1,439,951
Dorchester.....	.....	143,311	2,735	5,083	7,335	.....	.....	1,683,070	164,248	26,952	2,032,734
Brighton.....	.....	130	2,158	.....	4,094	.....	.....	767,251	115,810	4,815	894,258
Total.....	1,334,315	22,238,097	58,995	39,426	65,374	2,239	115,055	16,480,706	438,446	132,485	9,905,138

Total area of pavements on public streets, 9,905,138 square yards.

None.—In the above table the city is subdivided substantially on the boundary lines between the districts as they existed when annexed to Boston.

Territory annexed from Brookline is included in city proper.

1 Of this amount 95 square yards equal asphalt blocks.

2 Of this amount 541,762 square yards equal granite block paving on concrete base;

a Of this amount 1,801 square yards equal Hassam pavement, and 946 square yards equal Blome granitoid concrete blocked pavement, and 169,919 square yards equal bituminous macadam.

24,834 square yards public alleys laid out under chapter 298 of the Acts of 1898 included in this table.

In addition to this table there are 4,727 square yards accepted foot passageways.

The following changes in pavements were made during the year:

- 0.04 mile or 479 square yards granite block changed to asphalt.
- 0.20 mile or 3,196 square yards granite block changed to wood block.
- 0.57 mile or 11,451 square yards granite block changed to brick.
- 0.00 mile or 8 square yards wood block changed to brick.
- 0.03 mile or 719 square yards plank on bridges changed to brick.
- 1.11 miles or 28,690 square yards macadam changed to granite block.
- 1.45 miles or 27,799 square yards macadam changed to brick.
- 0.02 mile or 366 square yards gravel changed to granite block.
- 0.11 or 1,708 square yards gravel changed to brick.
- 4.88 miles or 76,069 square yards gravel changed to macadam.
- 0.06 mile or 1,017 square yards not graded changed to granite block.
- 0.02 mile or 1,244 square yards not graded changed to brick.
- 0.00 mile or 196 square yards not graded changed to plank on bridges.
- 0.26 mile or 11,909 square yards not graded changed to macadam.
- 0.03 mile or 572 square yards not graded changed to gravel.

Streets laid out or discontinued by the Street Commissioners during the year show:

- Brick increased mile or 26 square yards.
- Macadam increased 0.20 mile or 3,839 square yards.
- Gravel increased 2.21 miles or 36,140 square yards.
- Not graded increased 0.00 mile or 2,192 square yards.

Corrections on account of revision and other causes show:

- Asphalt decreased 0.03 mile or 118 square yards.
- Granite block increased 0.04 mile or 4,839 square yards.
- Plank on bridges decreased 0.03 mile or 1,051 square yards.
- Bitulithic decreased 0.00 mile or 83 square yards.
- Macadam increased 0.18 mile or 8,555 square yards.
- Gravel increased 0.01 mile or 412 square yards.
- Not graded decreased 0.00 mile or 392 square yards.

### Length of Pavements.

*The Following Table Shows Length in Miles and Character of Pavement on Accepted Streets February 1, 1910.*

District.	Asphalt.	Granite Block.	Wood Block.	Plank on Bridges.	Brick.	Cobble.	Bitulithic.	Macadam.	Gravel.	Not Graded.	Totals.
Year 1909 report.....	21.97	98.21	2.41	1.95	1.48	0.29	6.18	350.85	31.23	.4.06	518.63
February 1, 1911.											
City Proper.....	16.77	42.12	2.08	0.52	0.45	0.15	3.59	28.17	0.03	0.02	93.90
Charlestown.....	0.33	11.35	.....	0.17	0.04	.....	.....	11.59	0.02	.....	23.50
East Boston.....	0.11	6.28	.....	0.19	.....	0.14	0.03	21.72	0.84	0.03	29.34
South Boston.....	1.99	18.06	.....	0.37	0.11	.....	1.04	20.44	0.91	2.34	45.26
Roxbury.....	2.78	12.25	0.42	0.05	2.58	.....	1.52	63.81	2.96	0.18	86.55
West Roxbury.....	1.63	.....	.....	0.11	.....	.....	.....	77.58	5.39	0.33	85.04
Dorchester.....	.....	6.86	0.11	0.22	0.48	.....	.....	96.37	10.48	0.64	115.16
Brighton.....	.....	0.08	.....	.....	0.26	.....	.....	34.13	7.84	0.15	42.46
Totals.....	121.98	298.63	2.61	1.89	3.66	0.29	6.18	353.81	28.47	3.69	521.21

Total length of pavement on public streets, 521.21 miles.

*Note*.—In the above table the city is subdivided substantially on the boundary lines between the districts as they existed when annexed to Boston. Territory annexed from Brookline is included in city proper.

<sup>1</sup> Of this amount 0.02 mile equals asphalt blocks.

<sup>2</sup> Of this amount 19.15 miles equals granite block paving on concrete base.

<sup>3</sup> Of this amount 0.12 mile equals Hassam pavement, and 0.06 mile equals Blome granitoid concrete blocked pavement, and 10.08 miles equals bituminous macadam.

4.82 miles public alleys laid out under chapter 298 of the Acts of 1898 included in this table.  
6.80 miles public streets in charge of Park Department included in this table.  
In addition to this table there are 0.92 mile accepted foot passageways.

Public streets laid out by the Street Commissioners during the year show pavements increased 2.41 miles or 42,197 square yards.

Corrections to previous measurements on account of revision and other causes show pavements increased 0.17 mile or 12,162 square yards.

Total net increase 2.58 miles, or 54,359 square yards pavements on public streets.

The rate of increase from year to year is shown in the following table:

	Miles.		Miles.		Miles.
1859.....	111.50	1884.....	374.10	1898.....	471.19
1871.....	201.32	1885.....	379.60	1899.....	479.47
1872.....	207.40	1886.....	383.55	1900.....	489.55
1873.....	209.24	1887.....	390.30	1901.....	491.85
1874.....	313.90	1888.....	392.72	1902.....	496.90
1875.....	318.58	1889.....	397.84	1903.....	499.85
1876.....	327.50	1890.....	404.60	1904.....	500.39
1877.....	333.20	1891.....	409.60	1905.....	502.20
1878.....	340.39	1892.....	434.59	1906.....	502.80
1879.....	345.19	1893.....	443.34	1907.....	510.04
1880.....	350.54	1894.....	447.65	1908.....	511.60
1881.....	355.50	1895.....	452.12	1909.....	514.28
1882.....	359.85	1896.....	456.11	1910.....	518.63
1883.....	367.99	1897.....	459.12	1911.....	521.21

## DESCRIPTION OF DISTRICTS, 1910.

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The City of Boston is hereby divided into Street Department districts, ten in number, described and bounded as follows:

*District 1. South Boston and Dorchester North.* Bounded northerly by the Harbor Commissioners' line to Congress street, thence by and including Congress street to Atlantic avenue, thence westerly by and not including Atlantic avenue and Atlantic avenue extension to the South bay and Fort Point channel, thence by Fort Point channel and Midland Division of the N. Y., N. H. & H. R. R. to Dudley street, thence southerly by and not including Dudley street, Stoughton street, Pleasant street and Savin Hill avenue to Old Colony Division of the N. Y., N. H. & H. R. R., by and not including Savin Hill avenue, northerly side, to the Harbor Commissioners' line, thence easterly by the Harbor Commissioners' line to the point of beginning.

*District 2.—East Boston and Breed's Island.*

*District 3.—Charlestown.*

*District 4.—Brighton.* Bounded easterly by District 8, namely, from the Charles river by and not including Essex street to the Brookline line.

*District 5.—West Roxbury.* Bounded northerly by District 7, namely, from the Brookline line by and including Prince street to the Arborway, Arborway to Pond street, by and including Pond street, Centre street, Green street and Glen road to Franklin Park, by and not including Sigourney street to Walnut avenue, Seaver street, Blue Hill avenue and Canterbury street to Morton street, by and including Canterbury street and Ashland street to Harvard street, by and not including Harvard street to the Hyde Park line, to the Dedham, Newton and Brookline lines to the point of beginning.

*District 6.—Dorchester.* Beginning at the Harbor Commissioners' line, by and including Savin Hill avenue, Pleasant street, Stoughton street and Dudley street to Midland Division of the N. Y., N. H. & H. R. R.

to Columbia road, by and not including Columbia road to Blue Hill avenue, by and including Blue Hill avenue, Canterbury street and Angell street to Blue Hill avenue and Talbot avenue, by and not including Talbot avenue, Ashmont street and Freeport street to Commercial Point Bridge, to Harbor Commissioners' line to point of beginning.

*District 7.—Roxbury South and Jamaica Plain.* Bounded northerly by District 8, namely, beginning at Longwood avenue and Brookline line, by and including Longwood avenue, Prentiss street, Linden Park street, Roxbury street, Guild row, Dudley street and Magazine street to Norfolk avenue, by and not including Norfolk avenue to the Midland Division of the N. Y., N. H. & H. R. R. to Columbia road, by and including Columbia road, Blue Hill avenue, Seaver street, Walnut avenue and Sigourney street to Glen road, by and not including Glen road, Green street, Centre street and Pond street to Arborway, by and not including Prince street to Brookline line, to Muddy river, to Longwood avenue.

*District 8.—South End and Roxbury North.* Bounded northerly by District 10, namely, beginning at Fort Point channel and Atlantic avenue extension, by and including Atlantic avenue extension, Kneeland street, Eliot street, Park square, Boylston street and Massachusetts avenue to Charles river, by the west bank, to and including Essex street to the Brookline line, to Longwood avenue, by and not including Longwood avenue, Prentiss street, Linden Park street, Roxbury street, Guild row, Dudley street and Magazine street to Norfolk avenue, by and including Norfolk avenue to the Midland Division of the N. Y., N. H. & H. R. R. to Fort Point channel, to point of beginning.

*District 9.—Ashmont.* Bounded northerly by District 6, namely, beginning at the Harbor Commissioners' line to Commercial Point Bridge, by and including Freeport street, Ashmont street and Talbot avenue to Blue Hill avenue, by and not including Angell street, by and including Canterbury street to Morton street, by and not including Canterbury street to Morton street, by and not including Canterbury street and Ashland street to Harvard street, by and including Harvard street to Hyde Park line, by the Hyde Park line and the Milton line to Neponset river, to Harbor Commissioners' line.

*District 10.—North and West Ends and Back Bay.*  
Beginning at Atlantic avenue and Kneeland street, by and not including Kneeland street, Eliot street, Park square, Boylston street and Massachusetts avenue to Charles river, by the west bank, Charles river to the Harbor Commissioners' line to Congress street, by and not including Congress street to Atlantic avenue, by and including Atlantic avenue to Kneeland street.

Respectfully submitted,

L. K. ROURKE,  
*Superintendent of Streets.*

PART II.

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## APPENDICES.



## APPENDIX A.

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### REPORT OF THE DEPUTY SUPERINTENDENT OF THE FERRY DIVISION.

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BOSTON, January 31, 1911.

MR. LOUIS K. ROURKE,  
*Superintendent of Streets:*

DEAR SIR,— I respectfully submit report of income, expenditures and operation of the Ferry Division for the financial year ending January 31, 1911, and strongly urge that the following improvements be made:

North Pier, South Ferry, Boston side, be rebuilt, the South Pier, North Ferry, Boston side, be rebuilt and that the ends of the middle pier, North Ferry, Boston side, be repaired.

The piling of the repair dock, South Ferry, East Boston, should also be repaired.

Several of the foundations for drops need repairs where foundations have settled and irons are worn out.

The truss rods of drops should be adjusted.

Guide piles on sides of tanks need repairs.

Six bunters need renewal on drops.

North Pier, East Boston side, North Ferry, rebuild ends and head of pier.

Middle Pier, East Boston side, North Ferry, repair pier near head.

South Ferry, East Boston, some repairs needed on the piers.

South Ferry, Boston side, wharf where towboats tie up is in very poor condition.

I further recommend that all the head-houses and drops be painted.

The following changes were inaugurated in the division during the past year, in an endeavor to improve the service.

On Saturday evenings the second boat at the South

Ferry was continued until 10 o'clock p. m. (to accommodate the market people), instead of hauling off at 8 p. m. as formerly.

A third boat was added to the service at the South Ferry in July, 1910.

All repair work that interfered with the traffic is done at night or on Sundays.

At the North Ferry the unloading of coal to the coal pocket, which was always a source of annoyance and a delay to travel, is now done on Sundays or at night, thus giving a minimum of delay.

Four additional watchmen have been added to the division for the protection of boats when not running.

One extra gateman has been employed at the South Ferry, Boston side, because of the increased work due to the third boat.

The ferryboat "General Sumner" was rebuilt and put in commission in June, 1910.

An appropriation for a new boat has been received and plans and specifications are now ready.

The property in charge of this division is as follows:

*South Ferry, East Boston side.*— Located at the termination of Lewis street, and covers an area of 58,725 square feet of land and water. On these premises are one head-house with canopies, one workshop for carpenters, machinist and blacksmith, one storehouse, one modern coal pocket, three piers which form the two slips, two drops and tanks, one wharf and dock where boats are laid when not in use or while undergoing repairs.

*South Ferry, Boston side.*— Located at the termination of Eastern avenue, and covers an area of 38,135 square feet of land and water, on which are one head-house with canopies, one gate room, three piers which form the two slips, and two drops and tanks.

*North Ferry, Boston side.*— Located at the termination of Battery street and covers an area of 45,000 square feet of land and water, on which are one head-house with canopies, one gate room, three piers which form the two slips, and two drops and tanks.

*North Ferry, East Boston side.*— Located at the termination of Border street, and covers an area of 62,138 square feet of land and water, on which are one head-house with canopies, one boiler and room, one coal pocket, three piers which form the two slips, and two drops and tanks.

The following steam ferryboats are in commission:

Name.	When Built.	Kind.	Length.
Revere.....	1875	Side-wheel,	148 ft.
D. D. Kelly.....	1889	"	148 "
Hugh O'Brien.....	1883	"	163 "
General Hancock.....	1887	"	148 "
Noddle Island .....	1899	Propeller,	164 " 3 in.
Governor Russell.....	1900	"	164 " 3 "
General Sumner.....	1900	"	164 " 3 "

Respectfully yours,

H. P. CHRISTIERNIN,  
*Deputy Superintendent.*

**STREET DEPARTMENT.—FERRY DIVISION.**  
**CONSOLIDATED FINANCIAL STATEMENT FOR THE YEAR**  
**ENDING JANUARY 31, 1911.**

**1. Receipts.**

Total cash receipts during the year . . . . .	\$106,738 57
Cash in hands of tollmen at beginning of year . . . . .	200 00
	<hr/>
	\$106,938 57
Cash paid over to City Collector . . . . .	106,738 57
	<hr/>
Balance of cash on hand at end of year . . . . .	<u>\$200 00</u>

**2. Appropriations and Expenditures.**

Balance unexpended from previous years (loans),	\$40,015 60
Appropriation for new ferry boat, August 15, 1910 (loans) . . . . .	125,000 00
Received from City Treasurer, annual appropria- tion for this division for year ending January 31, 1911 . . . . .	230,000 00
Received additional by transfer . . . . .	5,920 63
	<hr/>
Total appropriations . . . . .	\$400,936 23
Total expenditures . . . . .	275,960 63
	<hr/>
Balance unexpended (loans) . . . . .	<u>\$124,975 60</u>

**3. Result of Operations for the Year.**

Receipts for the year (net income) . . . . .	\$106,738 57
Ordinary expenses . . . . .	\$235,920 63
Interest on ferry debt . . . . .	17,935 00
Depreciation of boats . . . . .	10,432 80
Depreciation of machinery and tools . . . . .	463 45
Cost of repairing ferryboat "General Sumner" . . . . .	39,500 00
	<hr/>
Less increase in valua- tion of real estate . . . . .	\$304,251 88
Less increase in stock of supplies . . . . .	6,100 24
	<hr/>
Net outgo for the year . . . . .	16,100 24
Net loss for the year . . . . .	<u>288,151 64</u>
	<hr/>
	\$181,413 07

## 4. Balance Sheet.

End of Fiscal Year, January 31, 1911.

ASSETS.	LIABILITIES.
AVAILABLE ASSETS:	CURRENT LIABILITIES:
Cash on hand.....	\$200 00
Inventory of supplies, viz.: { Fuel, \$6,642 96 Oil, etc., 4,187 84 }.....	10,830 80
Total available assets.....	\$11,030 80
CONTINGENT ASSETS:	CONTINGENT LIABILITIES:
City Treasury, balance of appropriations.....	124,975 60
FIXED ASSETS:	Appropriations account.....
Real estate and buildings <sup>1</sup> .....	2 616,400 00
Ferryboats <sup>2</sup> .....	163,987 25
Machinery, tools, etc. ....	4,171 05
Total tangible assets.....	\$920,564 70
Avenues, etc., East Boston <sup>3</sup> .....	315,815 68
Deficiency or loss by operation and maintenance of the ferries for fifty-three years to date.....	3,525,261 72
	\$4,761,642 10
Original purchase of ferries.....	\$276,375 00
New buildings, drops, slips, etc., cost to date.....	555,323 64
Land, Lincoln's Wharf, east, 1887.....	5,562 52
Land, Battery Wharf, cost, 1893.....	10,000 00
	\$887,461 16
Assessors' figures. This amount was increased by \$10,000 over last year for constructing new piers and buildings as headquarters for the fireboats of the Fire Department.	
Total cost to date, per ferry books.....	\$618,610 58
Less boats sold, depreciated or destroyed.....	454,623 33
	\$163,987 25

<sup>1</sup> Cost (net) previous to 1870, per ferry books, viz.:  
"Expenditures for avenue ..... \$250,000 00  
"Expenditures for improvements..... 63,815 68  
\$315,815 68

These expenditures were practically subsidies to the East  
Boston Ferry Company by the city before the ferries were  
purchased by the latter and should properly be added to the  
deficiency or loss.

## 5. Comparison of Receipts, Appropriations and Expenditures for Five Years.

	1906-07.	1907-08.	1908-09.	1909-10.	1910-11.
<b>RECEIPTS.</b>					
From foot passengers (tollmen).....	\$60,347 28	\$61,211 43	\$61,681 72	\$61,419 42	\$60,981 61
" foot passes (office sales) .....	668 70	578 70	1,440 30	634 30	638 00
" extra passengers on teams (gatemen) .....	1,518 46	1,454 72	1,488 24	1,443 54	1,471 79
" team tickets (office sales) .....	463 00	365 00	386 50	547 00	805 50
" strip team tickets (tollmen) .....	25,813 00	26,492 50	24,088 00	26,233 00	25,703 50
" teams (gatemen) .....	13,910 98	13,836 34	14,730 19	15,325 74	15,484 21
" City Collector for tickets .....	688 00	487 50	370 00	100 00	168 50
" free ferries, July 4.....	1 00	1 00	1 00	1 00	1 00
Total from rates.....	\$103,410 42	\$104,427 19	\$103,185 95	\$105,704 00	\$105,254 11
From rents.....	930 66	1,009 00	414 00	405 66	497 34
" old material sold .....	74 90	114 00	3 25	193 59	157 66
" other sources.....	36 96	114 36	641 26	1,029 05	829 46
Total ordinary receipts.....	\$104,452 94	\$105,664 55	\$104,244 46	\$107,332 30	\$106,738 57
From cash in hands of tollmen.....	\$350 00				
Total receipts turned over to City Collector.....	\$104,802 94	\$105,664 55	\$104,244 46	\$107,332 30	\$106,738 57
<b>APPROPRIATIONS.</b>					
Regular annual appropriations.....	\$243,000 00	\$250,000 00	\$225,000 00	\$230,000 00	\$230,000 00
Transfers from other sources.....	.....	.....	.....	.....	5,920 63
Special appropriations:					
Repairing ferryboat "General Sumner",	.....	.....	.....	40,000 00	125,000 00
New ferryboat.....	.....	.....	.....	.....	.....
Total appropriations.....	\$243,000 00	\$250,000 00	\$225,000 00	\$270,000 00	\$360,920 63

## EXPENDITURES (ORDINARY).

Office:							
Deputy Superintendent's salary.....	\$3,000 00	\$566 67	\$2,908 79	\$3,000 00	\$3,000 00		
Clerks and cashier.....	3,778 33	4,400 00	4,399 97	4,353 33	4,600 00		
Stationery.....	394 79	256 18	307 09	184 76	191 02		
Printing.....	1,116 86	1,273 53	1,250 05	988 02	1,178 15		
Telephones.....	93 90	236 62	253 90	213 20	213 25		
Advertising.....	.....	18 15	40 31	72 21	14 80		
Traveling expenses.....	.....	.....	200 00	.....			
Car fares.....	.....	60 00	58 00	53 00	58 00		
Postage.....	100 00	188 00	170 90	11 58	25 62		
Premiums, surety companies.....	200 00	.....	180 00	180 00	176 00		
Examination of accounts.....	.....	.....	.....	.....	.....		
Total office expenses.....	\$8,683 88	\$6,999 15	\$9,289 01	\$9,236 10	\$9,456 84		
Ferryboats and landings:							
Employees (wages).....	158,244 23	169,097 23	166,105 60	150,600 12	158,594 43		
Fuel.....	36,669 13	45,181 13	35,042 86	30,629 72	36,741 08		
Tearing, weighing coal, etc.....	4,963 80	4,295 80	4,969 73	2,795 07	2,791 89		
Oil, waste and supplies.....	9,433 26	8,329 97	7,329 56	7,061 92	7,338 79		
Gas.....	455 32	392 44	654 06	660 56	475 94		
Electric light.....	5,326 60	4,426 24	4,255 00	3,412 57	3,705 69		
Towing teams by electric power.....	243 40	193 34	133 66	117 00	123 02		
Repairs of boats.....	21,145 72	22,231 94	13,199 81	10,959 95	11,417 71		
“ buildings, piers and drops.....	13,274 19	30,756 60	6,742 86	5,798 89	4,450 35		
Furnishings, electric, etc.....	618 98	437 96	316 21	227 51	241 70		
Other expenditures <sup>1</sup> .....	2,640 532	1,2,016 02	1,1,030 03	1,601 69	1,583 19		
Total from regular annual appropriations.....	\$265,463 83	\$294,357 82	\$249,068 39	\$222,101 10	\$235,920 63		

<sup>1</sup> Includes repair of coal carts, analysis of coal, expressage and use of towboats.<sup>2</sup> Includes execution of court, \$4,290.73.

## 5. Comparison of Receipts, etc.—Concluded.

	1906-07.	1907-08.	1908-09.	1909-10.	1910-11.
<b>EXPENDITURES FROM SPECIAL APPROPRIATIONS.</b>					
New coal pocket, North Ferry, East Boston.....	\$25,000 00	.....	.....	.....	\$39,500 00
Repairing "General Sumner".....	.....	.....	.....	.....	540 00
New ferryboat.....	.....	.....	.....	.....	.....
Total expenditures, regular and special.....	\$290,463 83	\$294,357 82	\$249,068 39	\$222,101 10	\$275,960 63
Transfers to treasury.....	.....	.....	.....	7,898 80	.....
Total expenditures, including transfers.....	\$290,463 83	\$294,357 82	\$249,068 39	\$230,000 00	\$275,960 63
Balances in treasury unexpended:					
From special appropriations.....	15 60	15 60	15 60	40,015 60	124,975 60

## Comparative Balance Sheets at the close of each Year for Five Years.

	January 31, 1907.	January 31, 1908.	January 31, 1909.	January 31, 1910.	January 31, 1911.
<i>Assets.</i>					
Cash, tollmen's capital.....	\$200 00	\$200 00	\$200 00	\$200 00	\$200 00
Fuel and supplies in stock.....	4,295 14	18,970 60	13,307 77	4,730 56	10,830 80
City Treasurer (balance of appropriations).....	15 60	15 60	15 60	40,015 60	124,975 60
Real estate, buildings, (assessors' valuation).....	573,400 00	578,400 00	606,400 00	606,400 00	616,400 00
New buildings <sup>1</sup> .....	25,000 00				
Ferryboats (less depreciation).....	209,346 74	196,785 94	184,978 78	173,880 05	163,987 25
Machinery and tools (less depreciation).....	6,151 95	5,536 76	5,149 45	4,634 50	4,171 05
Total tangible assets.....	\$818,409 43	\$799,908 90	\$810,051 60	\$829,860 71	\$920,564 70
Cost of avenues, etc., East Boston (previous to 1870) <sup>2</sup> .....	315,815 68	315,815 68	315,815 68	315,815 68	315,815 68
Deficiency of assets (loss).....	2,823,306 28	3,038,382 58	3,190,953 96	3,343,848 65	3,525,261 72
Totals.....	\$3,957,531 39	\$4,154,107 16	\$4,316,821 24	\$4,489,525 04	\$4,761,642 10
<i>Liabilities.</i>					
Capital invested by City of Boston to date.....	\$3,957,515 79	\$4,154,091 56	\$4,316,805 64	\$4,449,509 44	\$4,636,666 50
Appropriations account (credit balances).....	15 60	15 60	15 60	40,015 60	124,975 60
Total liabilities.....	\$3,957,531 39	\$4,154,107 16	\$4,316,821 24	\$4,489,525 04	\$4,761,642 10

## Detail of Capital Invested by the City of Boston.

Total expenditures to date, per ferry books.....	\$9,849,968 17	\$10,152,247 67	\$10,419,391 06	\$10,659,427 16	\$10,953,322 79
Interest on debt for the year (per City Auditor).....	18,114 18	18,075 00	17,935 00	17,935 00	17,935 00
Interest previous years, etc. (net debits per auditor).....	279,148 85	279,148 85	279,148 85	279,148 85	279,148 85
Total expenditures <sup>3</sup> .....	\$10,147,231 20	\$10,449,471 52	\$10,716,474 91	\$10,956,511 01	\$11,250,406 64
Deduct total receipts paid to collector <sup>4</sup> .....	6,189,715 41	6,295,379 96	6,399,669 27	6,507,001 57	6,613,740 14
Excess of expenditures, viz., capital invested by city.....	\$3,957,515 79	\$4,154,091 56	\$4,316,805 64	\$4,449,509 44	\$4,636,666 50

<sup>1</sup> Included in real estate and buildings by assessors.<sup>2</sup> See footnote 4 under Table 4.<sup>3</sup> Auditor's figures for total expenditures and receipts are \$60,278.56 more than the above, the difference (capital invested) being the same; \$3,542.50 for additional interest and \$33 counted twice on total of ferry books have also been included in these figures.

**Total Expenditures upon Ferries since 1858-59.**

Expenditures for avenues, paving, interest, etc., previous to purchase of the ferries by the city *	\$444,101	30
Purchase of ferries, April, 1870	276,375	00
Expenditures for ferryboats since April, 1870, †	618,610	58
Expenditures for new buildings, piers, drops, etc. †	555,523	64
Expenditures for tools and fixtures †	14,752	46
Expenditures for land from Lincoln's Wharf in 1887	5,562	52
Expenditures for land from Battery Wharf in 1893	10,000	00
Total expenditures on capital account	\$1,924,925	50
Expenditures for repairs of all kinds †	990,615	47
Expenditures for fuel †	1,466,938	54
Expenditures for salaries and wages †	5,204,523	57
Expenditures for all other purposes	1,723,682	12
	<u>\$11,310,685</u>	<u>20</u>

**Total Receipts from Ferries since 1858-59.**

Receipts from rents, etc., previous to purchase of ferries	\$29,588	56
Receipts from ferry tolls since purchase of ferries †	6,385,128	98
Receipts from rents since purchase of ferries †	63,150	79
Receipts from sales of ferryboats †	147,331	21
Receipts from all other sources, per ferry books † ‡	18,284	31
Receipts from all other sources, additional, per auditor.	30,734	85
Total receipts from all sources	\$6,674,218	70
Less amount with tollmen as capital	200	00
Total receipts, per auditor's figures	<u>\$6,674,018</u>	<u>70</u>

\* See footnote 4 under Table 4.

† According to books of the Ferry Division.

‡ \$104.18 rejected money and \$33 counted twice have been deducted from this item. See previous reports.

REGULAR ANNUAL (ORDINARY) AND SPECIAL APPROPRIATIONS (EXTRAORDINARY) OF THE FERRY DIVISION OF THE STREET DEPARTMENT FOR THE YEAR ENDING JANUARY 31, 1911.

Appropriation (regular) for the year ending January 31, 1911	\$230,000 00
Transfers from other sources, additional	5,920 63
Amount of expenditures for the year	<u>\$235,920 63</u>

SPECIAL APPROPRIATIONS.

Appropriation authorized and issued May 27, 1902, for ferry improvements	\$100,000 00
Amount expended from May 27, 1902, to January 31, 1911	99,984 40
Unexpended balance of appropriation January 31, 1911	<u>\$15 60</u>
Appropriation authorized January 19, 1910, for transfer from Lamp Division for repairing ferryboat "General Sumner"	\$40,000 00
Amount expended from January 19, 1910, to January 31, 1911	39,500 00
Unexpended balance of this appropriation, January 31, 1911	<u>\$500 00</u>
Appropriation authorized and issued August 15, 1910, for new ferryboat	\$125,000 00
Amount expended from August 15, 1910, to January 31, 1911	540 00
Unexpended balance of this appropriation January 31, 1911	<u>\$124,460 00</u>

STATEMENT SHOWING RECEIPTS AT EACH FERRY.

*North Ferry.*

FROM TOLLMEN.	Foot Passengers.	Team Tickets.	Totals.
East Boston side.....	\$17,015 49	\$9,605 50	\$26,620 99
Boston side.....	17,750 41	5,837 00	23,587 41
	\$34,765 90	\$15,442 50	\$50,208 40

From tollmen . . . . .		\$50,208 40
From gatemen:		
For 82,000 foot passengers at 1 cent, . . . . .	\$820 00	
For cash fares for teams . . . . .	7,451 11	
		8,271 11
Total at North Ferry . . . . .		<u>\$58,479 51</u>

*South Ferry.*

FROM TOLLMEN.	Foot Passengers.	Team Tickets.	Totals.
East Boston side.....	\$12,715 77	\$3,695 00	\$16,410 77
Boston side.....	13,499 94	6,566 00	20,065 94
	\$26,215 71	\$10,261 00	\$36,476 71

From tollmen . . . . .		\$36,476 71
From gatemen:		
For 65,179 foot passengers at 1 cent, . . . . .	\$651 79	
For cash fares for teams . . . . .	8,033 10	
		8,684 89
Total at South Ferry . . . . .		<u>\$45,161 60</u>
North and South Ferries as above . . . . .		\$103,641 11
Tickets paid for at office of City Collector . . . . .		168 50
Tickets paid for at office of Ferry Division . . . . .		1,443 50
Received in lieu of free ferries July 4, 1910 . . . . .		1 00
Total receipts from rates . . . . .		\$105,254 11
Rents for the year . . . . .		497 34
Sales of old material . . . . .		157 66
Commissions on public telephone . . . . .		28 16
Reimbursed damages . . . . .		1 30
Head-house privileges . . . . .		800 00
Total cash receipts for the year . . . . .		<u>\$106,738 57</u>

## STATEMENT SHOWING THE DIFFERENCE OF TRAVEL ON THE FERRIES FROM FEBRUARY 1, 1910, TO JANUARY 31, 1911.

	North Ferry.	South Ferry.
Foot passengers at 1 cent each.	3,558,590	2,686,750
Foot passengers by ticket	44,604	23,752
Foot passengers free	2,408	1,419
	<hr/>	<hr/>
	3,605,602	2,711,921
One-horse teams and pleasure carriages	349,408	275,673
Two-horse teams	140,182	101,714
Three-horse teams	7,261	3,779
Four-horse teams	4,203	5,295
Two-horse pleasure carriages and hacks	26,879	13,824
Handcarts, etc.	4,203	1,865
Dragwheels	1	4
Free teams	4,752	634
	<hr/>	<hr/>
Total teams each ferry	536,889	402,788

## STATEMENT OF TRAVEL FROM BOSTON TO EAST BOSTON AND FROM EAST BOSTON TO BOSTON FROM FEBRUARY 1, 1910, TO JANUARY 31, 1911.

	From Boston Side.	From East Boston Side.
Foot passengers at 1 cent each.	3,199,818	3,045,522
Foot passengers by ticket	33,755	34,601
Foot passengers free	1,472	2,355
	<hr/>	<hr/>
Total foot passengers	3,235,045	3,082,478
One-horse teams and pleasure carriages	316,150	308,931
Two-horse teams	121,791	120,105
Three-horse teams	5,572	5,468
Four-horse teams	4,799	4,699
Two-horse pleasure carriages and hacks	20,209	20,494
Handcarts, etc.	3,066	3,002
Dragwheels	2	3
Free teams	2,025	3,361
	<hr/>	<hr/>
Total teams both sides	473,614	466,063

**TOTAL TRAVEL ON BOTH FERRIES FROM FEBRUARY 1,  
1906, TO JANUARY 31, 1911.**

	From Feb. 1, 1906, to Jan. 31, 1907.	From Feb. 1, 1907, to Jan. 31, 1908.	From Feb. 1, 1908, to Jan. 31, 1909.	From Feb. 1, 1909, to Jan. 31, 1910.	From Feb. 1, 1910, to Jan. 31, 1911.
One-horse teams.....	634,839	608,744	612,167	625,723	625,081
Two-horse teams.....	225,024	238,911	214,572	245,131	241,896
Three-horse teams.....	10,409	8,091	8,262	11,929	11,040
Four-horse teams.....	11,547	16,897	11,488	9,257	9,498
Two-horse carriages and hacks....	18,571	26,381	30,720	36,667	40,703
Two-cent tolls for handcarts, etc...	4,936	5,251	5,058	5,934	6,068
Dragwheels, etc.....	41	23	29	12	5
Total teams at both ferries....	905,367	904,298	882,296	934,653	934,291
Total foot passengers.....	6,292,393	6,353,101	6,385,697	6,352,461	6,313,696

## List of Contracts February 1, 1910, to January 31, 1911.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1911.
* Installing eight weighing and ten vending machines at head-houses.....	National Automatic Weighing Machine Co.,	Feb. 4, 1910.	Completed.	\$ \$800 00	\$ \$800 00
† Covering boilers, pipes and valves on ferryboat "General Sumner" .....	Ehret Magnesia Manufacturing Company ...	April 28, 1910.	Completed.	370 00	370 00
‡ 10,000 tons of coal.....	Metropolitan Coal Company.....	April 28, 1910.	Not Completed.	35,900 00	25,865 20
† Plans, specifications and superintendence for building new ferryboat.....	Swascy, Raymond & Page .....	Oct. 17, 1910.	Not Completed.	2,700 00	540 00

\* Advertised and awarded to lowest bidder.

† Awarded without competition.

‡ Contract made by Supply Department.

§ Paid to the city.

APPENDIX B.

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REPORT OF THE DEPUTY SUPERINTENDENT  
OF THE HIGHWAY DIVISION.

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BOSTON, MASS., January 31, 1911.

MR. LOUIS K. ROURKE,

*Superintendent of Streets:*

DEAR SIR,— I submit herewith a report of the income, expenditures and operations of the Highway Division for the year 1910. This includes the reports of both the Paving Service and the Bridge Service.

## PAVING SERVICE.

The permanent pavements adopted last year, such as the special cut granite block and the vitrified brick block pavements, have been extended this year for considerable areas in the city proper, Roxbury, West Roxbury and Dorchester.

The recommendation of previous years relative to the car track streets—that they be paved with granite, brick or some other durable wearing surface—is again made. Last year a good beginning was made in this respect on such streets as Washington street, West Roxbury; Hancock street, Dorchester, and Longwood avenue, Roxbury. The following streets were paved with special cut granite blocks: Charles street, between Beacon and Boylston streets; and Washington street, West Roxbury, from Green to Walk Hill streets. North Market street, from Merchants row to Commercial street, was paved with large granite block on a concrete base.

The streets paved with brick blocks on a concrete base were Dudley street, from Harrison avenue to Magazine street; Damrell street, from Dorchester avenue to Old Colony avenue; Hancock street, from Columbia road to Winter street; Heath street, from South Huntington

avenue to Parker street; Longwood avenue, from Huntington avenue to Brookline avenue, and Seneca street, from Harrison avenue to Albany street.

*Asphalt Work* was confined almost entirely to resurfacing old asphalt streets— Parkman street, from North Russell to Blossom street, being the only extension of the asphalt area during the year.

*Wood Blocks* were laid on Harvard street, from Washington street to Harrison avenue; Milk street, between Pearl and Oliver streets, and on Pearl and Oliver streets, respectively, 148 and 153 feet southerly from Milk street.

*Macadam*.— About 5.3 miles of new macadam streets were built in the residential sections of the city. With very few exceptions they are of the water bound type and were all built by contract. The maintenance of macadam streets is looked after by the department force. Some of the streets were treated with a coal tar product and a large area of ordinary water-bound macadam was resurfaced.

*Sidewalks*.— It has been the policy of the department during the past year to construct artificial stone sidewalks on all new streets and as a result there has been laid about seven (7) miles of sidewalks, or about 158,000 square feet under the "393" Act and about three (3) miles laid under the "437" Act of 1893.

*Crusher Plants*.— The stone crushing plants owned by the city are located at Codman street, Dorchester; Dimock street, Roxbury, and Chestnut Hill avenue, Brighton. The two former have not been operated for several years. The Chestnut Hill plant is operated under a lease, the contractor paying the city for each ton of stone quarried. The crushed stone required by the division for the resurfacing of streets has been furnished on the street in the different districts by contract.

*Street Openings*.— The total number of permits issued this year for street openings was 29,851. These openings are distributed all over the city and permanent pavements are disturbed as freely as macadam streets. From experience in past years it is evident that street openings will increase in the future with the changes in the older sections and the developments in the outlying sections of the city, resulting in a destruction of street surfaces. To offset consequent expense, which must ultimately devolve upon the city, for repairs caused by these openings, deposits are required, when deemed

necessary, from the parties making applications for the permits, which are applied towards the cost of the necessary repairs.

*Steam Rollers.*—At the beginning of the year the division owned eleven (11) 15-ton and one (1) 3-ton rollers, all being of the Buffalo-Pitts make, except the oldest in the service, which is an Aveling and Porter roller, made in England. The machines have had extensive repairs, about all of them being refitted with new speed pinions and shafts and new picks.

*Personal Property.*—The personal property of the division (Paving), consisting of tools, hardware, horses, carts, harnesses, rollers, etc., has been kept up and is in very good condition, having a value of about \$60,000.

*Yard and Wharf Room.*—The yards and wharves in the several districts are the same as last year, with the exception of the wharf property at 492 and 494 Chelsea street, which was sold at public auction early in the year to the Standard Oil Company, for \$20,100. A description of the property in charge of the division is given in another part of the report.

Respectfully submitted,

JAMES H. SULLIVAN,

*Deputy Superintendent.*

## HIGHWAY DIVISION (BRIDGE SERVICE).

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There are in the City of Boston 163 bridges, not including culverts. Seven of these, namely, Brookline street, Cambridge, Cambridge street, Harvard, North Harvard street, Prison Point, and Western avenue to Cambridge, all connecting Boston and Cambridge, are in charge of two commissioners, one of whom is appointed by the Mayor of Boston and the other by the Mayor of Cambridge. The Charles River dam, on the site of the old Craigie Bridge, is in charge of the Charles River Basin Commission. One hundred twenty-two bridges are supported wholly or in part by the City of Boston, twenty-five of these being tide-water bridges provided with a draw. Forty bridges are supported entirely by railroad corporations.

There are sixteen important drawbridges maintained by the City of Boston, namely, Broadway, Chelsea (south), Congress street, L street and Warren, operated by steam; Atlantic avenue, Charlestown, Chelsea (north), Chelsea street, Dorchester avenue, Dover street, Malden, Meridian street, Neponset and Summer street, operated by electricity, and Northern avenue, operated by compressed air, the compressors run by electricity.

During the past year the following bridges have been built, rebuilt or extensively repaired:

*Albany Street Bridge.*—Built an entire new floor, including steel floor beams, removed old overhanging sidewalks on outside of trusses and built new ones between trusses in roadway. Bridge has been entirely cleaned by sand blasting process and painted. The grades of roadway and sidewalk on bridge and also approaches have been changed in order to ease the gradient.

*Ashmont Bridge.*—An extension of about 58 feet over the Shawmut Branch, New York, New Haven & Hartford Railroad, has been added to the bridge during the past year.

*Broadway Bridge.*—Over Boston & Albany Railroad. This bridge has been entirely cleaned by sand blasting process and thoroughly painted. The hangers for the steel floor beams have been renewed, the wooden flooring and sidewalks have been renewed and some new stringers.

*Charlestown Bridge.*—On April 29, 1910, a fire in the power

room destroyed part of the woodwork, all the electrical equipment, and seriously damaged much of the operating machinery of the draw, some of the wooden deck over the power room, and part of each sidewalk near the center of the draw. This necessitated the stopping of all water traffic that could not pass under the draw, as it was out of commission completely for four days. After that it was in service only between the hours of 1.15 a. m. and 4.45 a. m., until June 1, when it was again in service to be opened on signal. A special appropriation was made to cover the cost of repairing the damage and to replace the draw in good working order. It was necessary to completely rebuild the power room, substituting metal and asbestos for the former wood-work, to renew the electrical equipment, and overhaul all the operating machinery, renewing parts severely damaged. This work has been completed except some of the cleaning and painting of the outside structural ironwork.

*Congress Street Bridge.*—This bridge has been entirely cleaned and painted and the surface of both sidewalks have been renewed, including some stringers.

*Dover Street Bridge.*—On August 10, 1910, a fire on an adjoining wharf at the southwest corner of this bridge destroyed part of the sidewalk planks, surface, facia, roadway plank, paving and steel I-beams under the sidewalk. The damaged parts were renewed and the work has been completed.

*Neponset Avenue Bridge.*—The surface of the Boston approach of this bridge has been renewed, some stringers replaced with new ones and new piles have been driven in the fender guards to replace broken or decayed ones.

*Summer Street Bridge (over Fort Point channel).*—The flooring of the draw foundation at this bridge has been entirely renewed.

*Tollgate Bridge.*—During the past year a footbridge was built from Hyde Park avenue to Washington street over the location of the Providence Division of the New York, New Haven & Hartford Railroad. It is a steel truss bridge supported on steel trestles with a wooden flooring and wooden steps for approaches.

The following-named bridges need extensive repairs:

*Chelsea South.*—The draw of this bridge is much too light to carry the traffic which goes over it, and the conditions there are a source of great inconvenience to the traveling public. The bridge is operated by steam, and there is but one boiler. It is almost impossible to operate it by hand, and in case of any accident to the boiler there is no reserve boiler as on the other bridges operated by steam. There is now an appropriation available for building a temporary bridge for use until such time as a permanent bridge is built.

*Cottage Street Footbridge.*—The entire length of this bridge needs repairing, and the fences, about 3,000 feet, should be painted.

*Meridian Street Bridge.*—An appropriation has been made to cover the expense of partially rebuilding this bridge, and the work will be done during the coming year.

*North Beacon Street.*—This bridge is in very poor condition, and should be rebuilt during the coming year.

*Southampton Street (over sluiceway).*—The wooden bulkheads are in very poor shape, and the general condition very dangerous. This bridge should be rebuilt at once.

*Winthrop Bridge.*—This bridge is in very poor condition. The amount paid for repairs annually would more than pay the interest on a loan sufficient to build a suitable bridge. The present bridge structure is too long, and the waterway could be partially filled and a new bridge built, of a much shorter length. Something should be done to replace this bridge at once.

The following is a summary of miscellaneous repairs on the various bridges during the past year:

#### TIDE-WATER BRIDGES.

*Atlantic Avenue.*—Sheathed; put in oak headers.

*Broadway Draw.*—Patched deck and sheathing three times; rebuilt draw and approaches; repaired pier twice; sheathed complete.

*Charlestown.*—Patched sheathing four times; repaired oak headers five times; sheathed complete twice; repaired sidewalks and bulkheads; repaired run to float; new gate posts; trimmed draw; painted power room inside.

*Chelsea North.*—Repaired oak headers three times; patched sheathing three times; trimmed draw; repaired sidewalk; repaired waterway; repaired rests for draw twice; put in two trucks; repaired gate.

*Chelsea South.*—Repaired gates; repaired latch; sheathed both sides twice; new oak headers; trimmed draw; patched sheathing twice; patched bulkhead; repaired doors and steps of house.

*Chelsea Street.*—Trimmed draw twice; built locker; painted landing stairs; painted signals on draw; painted roof of oil-house; patched sheathing.

*Commercial Point.*—Sheathed and put in new flaps; patched sheathing.

*Congress Street.*—Sheathed three times; oak headers three times; repaired gutter and latch; repaired sidewalks; new beam for gearing; patched sheathing twice; two new sidewalks; painted draw; shelter houses and fence; painted chords under sidewalks.

*Dorchester Avenue Draw.*— Patched deck and sheathing three times; sheathed complete; new headers twice; new stairs to pit; painted draw house and motor house; repaired gate and gate posts; rebuilt both draws; cleaned and painted iron-work of both draws; planked pier.

*Dover Street.*— Patched deck and sheathing six times; oak headers three times; sheathed downstream side; painted shelter houses and set glass; repaired sidewalk and roadway; cleaned and painted iron beams.

*L Street.*— Painted draw house inside and out; repaired sidewalks; removed waterway; patched sheathing; new oak headers.

*Malden.*— Trimmed draw; sheathed both sides; repaired wheel guards; repaired fence; painted draw house outside and inside; repaired sidewalk; repaired header; patched sheathing.

*Meridian Street.*— Painted draw house inside and out; repaired fence on draw twice; painted fence; patched sheathing; new oak headers; repaired wheel guard; sheathed both sides; repaired waterway of pier; repaired latches on draw; repaired house.

*Neponset.*— Patched deck and sheathing five times; repaired fender guard; new oak headers.

*North Beacon Street.*— Repaired hinges; patched deck and sheathing three times; sheathed draw complete.

*Northern Avenue.*— Built cover for jack slides; sheathed roadways three times; patched sheathing five times; repaired oak headers twice.

*Summer Street.*— Patched deck and sheathing four times; repaired draw house; repaired shelter house and motor house; painted draw house, shelter house and motor house; sheathed both sides; oak headers twice; rebuilt both draws; cleaned and painted both draws.

*Warren.*— Repaired track; repaired draw; patched sheathing nine times; repaired headers six times; sheathed complete; new oak headers; repaired rest on draw; repaired sidewalks three times; repaired gates; repaired landing three times; repaired house; patched deck twice; repaired pier; repaired fence twice; repaired wheel guard; painted both draws; painted house inside and out; repaired and painted stable on bridge; painted fence; repaired boiler room; built new gate; trimmed draw.

*Western Avenue to Watertown.*— Patched deck and sheathing; repaired wheel guard; rebuilt draw and approaches; painted ironwork.

#### INLAND BRIDGES.

*Albany Street.*— Patched and sheathed deck twice.

*Allston.*— Sheathed part of one side; patched sheathing.

*Ashland Street.*— Sheathed between tracks.

*Ashmont Bridge.*— Rebuilt.

*Baker Street.*— Sheathed.

*Beacon Street (B. & A.).*— Sheathed uptown side; patched downtown side twice.

*Blakemore Street.*— Patched sheathing; rebuilt roadway and sidewalks; cleaned and painted ironwork.

*Blue Hill Avenue.*— Patched sheathing and repaired sidewalks; sheathed both sides.

*Bolton Street.*— Repaired sidewalks.

*Boston Street.*— Sheathed uptown side.

*Boylston Street (B. & A.).*— Sheathed; patched sheathing once.

*Broadway (B. & A.).*— Cleaned and painted girders of span over main tracks; patched deck and sheathing eleven times.

*Brookline Avenue.*— Patched sheathing twice.

*Cambridge Street (B. & M.).*— Repaired sidewalks twice.

*Central Avenue.*— New beams; deck and sheathing.

*Columbus Avenue.*— Sheathed both sides; cleaned and painted I-beams under sidewalks; rebuilt sidewalks.

*Cottage Street Footbridge.*— Lowered approach; repaired piling.

*Dartmouth Street.*— Patched sheathing three times.

*Dorchester Avenue (over Plymouth Division).*— Patched uptown side; sheathed uptown side; patched deck.

*Ferdinand Street.*— Sheathed; patched sheathing.

*Florence Street.*— Sheathed.

*Gainsborough Street Footbridge.*— Repaired steps.

*Gold Street.*— Repaired and painted fence.

*Harvard Street.*— Sheathed one side.

*Hyde Park Avenue.*— Sheathed complete.

*Massachusetts Avenue (over Providence Division).*— Patched sheathing twice; sheathed both sides; sheathed center roadway.

*Milton.*— Repaired deck twice; repaired paving; patched deck and put in new beams.

*Norfolk Street (South, near Mattapan Station).*— Sheathed.

*Oakland Street.*— Sheathed both sides; patched sidewalk.

*Perkins Street Footbridge.*— Repaired steps twice; built new steps one side; patched deck.

*Shawmut Avenue.*— Cleaned and painted girders and fences.

*Southampton Street (over sluiceway).*— Patched deck and sheathing; rebuilt bridge.

*Southampton Street (over railroad).*— Sheathed both sides.

*West Fourth Street.*— Sheathed complete; patched sheathing three times; repaired sidewalk.

*West Newton Street.*— Sheathed.

*Winthrop Bridge.*— Sheathed; patched deck twice; patched sheathing; new wheel guards; repaired sidewalk.

## BRIDGE SERVICE.— FINANCIAL STATEMENT.

NOTE.— There was no specific appropriation made for the Bridge Service, but the sum of \$225,000 was set aside from the appropriation for Highway Division to cover expenditures for Bridge Service, including the bridges in charge of the Boston and Cambridge Bridge Commission.

Appropriation	\$225,000 00
Revenue: From Boston & Albany Railroad (one-half the expense of repairs on Albany Street Bridge during 1909)	311 64
	<hr/>
Total, appropriation and revenue	\$225,311 64
	<hr/>
Expended, February 1, 1910, to January 31, 1911:	
Account Boston bridges	\$201,995 00
Account Boston and Cambridge Bridges	22,006 57
	<hr/>
Total expended	\$224,001 57
Balance unexpended January 31, 1911	1,310 07
	<hr/>
	\$225,311 64
Amount expended on Boston bridges and charged to Highway Division	\$201,995 00
Amount expended on Boston bridges and charged to special appropriations	79,064 68
	<hr/>
Total expended on Boston bridges	\$281,059 68
Total expended on Boston and Cambridge bridges	22,006 57
	<hr/>
Grand total of expenditures	\$303,066 15

## EXPENDITURES ON BOSTON BRIDGES 1910.

## (1.) Office Expenses:

Salaries: Engineer, supervisor, clerk and messenger,	\$5,867 61
Printing, postage and stationery	420 24
Advertising	82 17
Telephones	197 22
Fares, etc.	66 72
Sundries	402 70
	<hr/>
	\$7,036 66
Carried forward	\$7,036 66

STREET DEPARTMENT — HIGHWAY DIVISION. 45

*Brought forward* . . . . . \$7,036 66

(2.) Bridges:

Salaries of drawtenders and caretakers	. . . . .	\$122,246 47
Lighting	. . . . .	916 71
Fuel	. . . . .	2,811 63
Water	. . . . .	79 80
Oil	. . . . .	1,398 63
Hardware and supplies	. . . . .	1,561 17
Sweeping and removing snow,	. . . . .	852 60
Sand	. . . . .	21 77
Furnishings	. . . . .	146 67
Repairing buildings, plumb- ing, etc.	. . . . .	603 67
Repairing piers, etc.	. . . . .	1,195 71
Electric power	. . . . .	3,310 21
Boats and repairing to same,	. . . . .	139 50
General repairs, roadways, etc.:		
Lumber	. . . . .	\$21,912 25
Nails	. . . . .	471 82
Ironwork, ma- chine repairs, etc.	. . . . .	4,839 55
Flagmen	. . . . .	93 61
Paint and stock,	. . . . .	722 67
Labor	. . . . .	15,955 66
Inspection	. . . . .	360 00
	—	44,355 56
	—	179,640 10

(3.) Yard and Stable:

Yard: Employees:		
Clerk, janitor, t e a m s t e r, watchmen	. . . . .	\$5,086 39
Machinist and electrician	. . . . .	2,326 36
	—	7,412 75
Heating	. . . . .	155 35
Lighting	. . . . .	101 36
Furnishings	. . . . .	40 75
Building repairs:		
Plumbing and general re-pairs	. . . . .	\$119 47
Labor	. . . . .	323 93
	—	443 40
Total yard	. . . . .	\$8,153 61
<i>Carried forward</i>	. . . . .	\$8,153 61 \$186,676 76

*Brought forward* . . . . . \$8,153 61 \$186,676 76

Stable:

W a g e s, stable-	
men and host-	
lers . . . . .	\$3,556 64
Feed for horses . .	1,332 81
Veterinary . . . .	96 72
Shoeing and clip-	
ping . . . . .	372 50
Harness and wag-	
ons and repairs	
to same . . . . .	1,066 70
Stable supplies . .	39 10
Automobile . . . .	671 00
M i s c e l l a n e o u s	
stable expenses . .	29 16

Total stable . . . . . 7,164 63

Total yard and stable . . . . . 15,318 24

Total expenditures . . . . . \$201,995 00

Summary of expenditures:

(1.) Office expenses . . . . .	\$7,036 66
(2.) On bridges . . . . .	179,640 10
(3.) Yard and stable . . . . .	<u>15,318 24</u>
Total . . . . .	<u><u>\$201,995 00</u></u>

Amounts Expended and Charged to Special Appropriations.

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	Unexpended Balances, Transfers and Appropriations, 1910.	Expended during 1910.	Balance Unexpended January 31, 1911.
Albany Street Bridge.....	\$10,000 00	\$9,833 35	\$166 65
Ashmont Bridge Extension.....	5,060 76	5,060 76	
Berkeley Street Bridge.....	5,448 06	5,448 06	
Broadway Bridge over Boston & Albany Railroad.....	12,000 00	10,880 60	1,119 40
Charlesstown Bridge repairs.....	25,000 00	14,306 97	10,693 03
Columbus Avenue Bridge.....	1,119 00	1,119 00	
Dover Street Bridge.....	9,000 00	3,573 30	5,426 70
Footbridge, Washington street to Hyde Park avenue.....	10,000 00	9,868 51	131 49
Granite Avenue Bridge.....	3 70	3 70	
Neponset Bridge, rebuilding.....	24,538 93	14,008 41	10,530 52
Summer Street Bridge.....	10,000 00	1,815 06	8,184 94
Warren Bridge.....	10,000 00	3,146 96	6,853 04
	\$122,170 45	\$79,064 68	\$43,105 77

## INCOME.

The total amount received by the City Collector on account of bridges during the fiscal year was \$105.72, which includes \$15.72 on account of the Boston and Cambridge Bridges. The items are as follows:

Account, Boston and Cambridge bridges, junk . . . . .	\$15 72
Account, Boston bridges, junk . . . . .	\$65 00
Rents, Thomas M. O'Connor . . . . .	25 00
	_____
	90 00
	_____
	<u>\$105 72</u>

## LIST OF BOSTON BRIDGES.

## I.—BRIDGES WHOLLY MAINTAINED BY BOSTON.

[In the list those marked with an asterisk (\*) are over navigable waters, and are each provided with a draw.]

*In Charge of Highway Division, Bridge Service.*

- Allston, over Boston & Albany Railroad at Cambridge street, Brighton.
- Ashland street, over N. Y., N. H. & H. Railroad, Providence Division, West Roxbury.
- Athens street, over N. Y., N. H. & H. Railroad, Midland Division.
- \* Atlantic avenue, over Fort Point channel.
- Baker street, at Brook Farm, West Roxbury.
- Beacon street, over outlet to Back Bay Fens.
- Beacon street, over Boston & Albany Railroad.
- Bennington street, over Boston, Revere Beach & Lynn Railroad.
- Berkeley street, over Boston & Albany Railroad.
- Berwick park (footbridge), over N. Y., N. H. & H. Railroad, Providence Division.
- Blakemore street, over N. Y., N. H. & H. Railroad, Providence Division.
- Bolton street, over N. Y., N. H. & H. Railroad, Midland Division.
- Boylston street, over Boston & Albany Railroad.
- Broadway, over Boston & Albany Railroad.
- \* Broadway, over Fort Point channel.
- Brookline avenue, over Boston & Albany Railroad.
- Brooks street, Brighton, over Boston & Albany Railroad.
- Byron street, over Boston, Revere Beach & Lynn Railroad.
- Charlesgate, over Ipswich street.
- \* Charlestown, from Boston to Charlestown.
- \* Chelsea South, over south channel, Mystic river.
- \* Chelsea street, from East Boston to Chelsea.

- Columbus avenue, over Boston & Albany Railroad.  
\* Commercial Point, or Tenean, Dorchester.  
\* Congress street, over Fort Point channel.  
Cottage Farm, over Boston & Albany Railroad, at Commonwealth avenue.  
Cottage street (footbridge), over flats, East Boston.  
Dartmouth street, over Boston & Albany Railroad.  
\* Dorchester avenue (formerly Federal street), over Fort Point channel.  
\* Dover street, over Fort Point channel.  
Ferdinand street, over Boston & Albany Railroad.  
Florence street, over Stony brook, West Roxbury.  
Gainsborough street (footbridge), over N. Y., N. H. & H. Railroad, Providence Division.  
Gold street (footbridge), over N. Y., N. H. & H. Railroad, Midland Division.  
Huntington avenue, over Boston & Albany Railroad.  
Hyde Park avenue, over Stony brook, West Roxbury.  
Ipswich street, over waterway.  
Irvington street (footbridge), over N. Y., N. H. & H. Railroad, Providence Division.  
\* L street, over reserved channel at junction of Summer and L streets.  
\* Malden, from Charlestown to Everett.  
Massachusetts avenue, over Boston & Albany Railroad.  
Massachusetts avenue, over N. Y., N. H. & H. Railroad, Providence Division.  
\* Meridian street, from East Boston to Chelsea.  
\* Northern avenue, over Fort Point channel.  
Shawmut avenue, over Boston & Albany and N. Y., N. H. & H. Railroad, Providence Division.  
Southampton street, east of N. Y., N. H. & H. Railroad, Midland Division.  
Summer street, over A street.  
Summer street, over B street.  
Summer street, over C street.  
\* Summer street, over Fort Point channel.  
Tollgate way (footbridge), over Providence Division, from Washington street to Hyde Park avenue, Forest Hills.  
\* Warren, from Boston to Charlestown.  
West Newton street, over N. Y., N. H. & H. Railroad, Providence Division.  
West Rutland square (footbridge), over N. Y., N. H. & H. Railroad, Providence Division.  
Winthrop, from Breed's Island to Winthrop.

*In Charge of Highway Division and Park Department.*

- Columbia road, over N. Y., N. H. & H. Railroad, Plymouth Division.  
Columbia road, over Shoreham street.

*In Charge of Park Department.*

- Agassiz, in Fens.  
 Arborway, in Arborway, over Stony brook.  
 Audubon, in Riverway, over Boston & Albany Railroad.  
 Bernier street (footbridge), over Muddy river.  
 Boylston, in Fens, over waterway.  
 Bridle path, in Riverway, over Muddy river.  
 \*Castle Island, in Marine Park, South Boston to Castle Island.  
 Charlesgate, in Fens, over Boston & Albany Railroad.  
 Circuit drive, over Scarboro pond, in Franklin Park.  
 Commonwealth avenue, in Fens, over waterway.  
 Ellicott Arch, in Franklin Park.  
 Fens, in Fens.  
 Forest Hills, in Franklin Park.  
 Leverett pond (foot), in Leverett Park.  
 Neptune, in Wood Island Park, over Boston, Revere Beach & Lynn Railroad.  
 Scarboro pond (foot), in Franklin Park.  
 Wood Island (foot), in Wood Island Park.

*In Charge of Public Grounds Department.*

- Public Garden (footbridge).

## II.—BRIDGES OF WHICH BOSTON MAINTAINS THE PART WITHIN ITS LIMITS.

*In Charge of Highway Division (Bridge Service).*

- Central avenue, from Dorchester to Milton.  
 \*Chelsea North, from Charlestown to Chelsea.  
 \*Granite, from Dorchester to Milton.  
 Milton, from Dorchester to Milton.  
 \*Neponset, from Dorchester to Quincy.  
 \*North Beacon street, from Brighton to Watertown.  
 Spring street, from West Roxbury to Dedham.  
 \*Western avenue, from Brighton to Watertown.

*In Charge of Park Department.*

- Bellevue street, in the Riverway, over Muddy river.  
 Bernier street (footbridge), over Muddy river.  
 Brookline avenue, in the Riverway, over Muddy river.  
 Huntington avenue, in the Riverway, over Muddy river.  
 Longwood avenue, in the Riverway, over Muddy river.

## III.—BRIDGES OF WHICH BOSTON PAYS A PART OF THE COST OF MAINTENANCE.

*In Charge of Highway Division (Bridge Service).*

- Albany street, over Boston & Albany Railroad (over freight tracks).

Ashmont street, junction Dorchester avenue and Talbot avenue, over N. Y., N. H. & H. Railroad, Plymouth Division (75 feet south of northerly end).

Harvard street, over N. Y., N. H. & H. Railroad, Midland Division.

Norfolk street, over N. Y., N. H. & H. Railroad, Midland Division, near Dorchester station.

*In Charge of Commissioners for Boston and Cambridge Bridges.*

Brookline street from Brighton to Cambridge.

Cambridge, from Boston to Cambridge.

\*Cambridge street, from Brighton to Cambridge.

\*Harvard, from Boston to Cambridge.

\*North Harvard street, from Brighton to Cambridge.

\*Prison Point, from Charlestown to Cambridge.

\*Western avenue, from Brighton to Cambridge.

IV.— BRIDGES OF WHICH BOSTON MAINTAINS THE WEARING SURFACE.

*In Charge of Highway Division (Bridge Service).*

Bennington street, over the Boston & Albany Railroad.

Blue Hill avenue, over N. Y., N. H. & H. Railroad, Midland Division.

Boston street, over N. Y., N. H. & H. Railroad, Plymouth Division.

Brookline street, Brighton to Cambridge, portion over the Boston & Albany Railroad.

Cambridge street, Charlestown, over Boston & Maine Railroad.

Chelsea, over Boston & Maine Railroad.

Curtis street, East Boston, over the Boston & Albany Railroad.

Dorchester avenue, over N. Y., N. H. & H. Railroad, Plymouth Division.

Everett street, over Boston & Albany Railroad, Brighton.

Maverick street, East Boston, over Boston & Albany Railroad.

Norfolk street, over N. Y., N. H. & H. Railroad, Midland Division, near Mattapan station.

Oakland street, over N. Y., N. H. & H. Railroad, Midland Division, Mattapan.

Perkins street (footbridge), over Boston & Maine Railroad.

Porter street, over Boston & Albany Railroad.

Prescott street, over Boston & Albany Railroad.

Reservoir Road, Brighton, over Boston & Albany Railroad, Newton Branch.

Saratoga street, over Boston & Albany Railroad.

Southampton street, over N. Y., N. H. & H. Railroad, Plymouth Division.

Sumner street, over N. Y., N. H. & H. Railroad, Midland Division.

Sumner street, East Boston, over Boston & Albany Railroad.

Webster street, East Boston (footbridge), over Boston & Albany Railroad.

West Fourth street, over N. Y., N. H. & H. Railroad, Plymouth Division.

V.— BRIDGE MAINTAINED BY CHARLES RIVER BASIN COMMISSION.

Charles River Dam (formerly Craigie's Bridge).

VI.— BRIDGE MAINTAINED BY METROPOLITAN PARK COMMISSION.

Mattapan Bridge.

VII.— BRIDGES MAINTAINED BY RAILROAD CORPORATIONS.

1st.— *Boston & Albany Railroad.*

Albany street (over passenger tracks).

Harrison avenue.

Market street, Brighton.

Tremont street.

Washington street.

2d.— *Boston & Maine and Boston & Albany Railroads.*

Main street.

Mystic avenue.

3d.— *Boston & Maine Railroad, Eastern Division.*

Wauwatosa avenue, East Boston.

4th.— *Boston, Revere Beach & Lynn Railroad.*

Everett street.

5th.— *New York, New Haven & Hartford Railroad, Midland Division.*

Dorchester avenue.

Morton street, Dorchester.

Washington street, Dorchester.

Silver street.

West Broadway.

West Fifth street.

West Fourth street.

West Second street.

West Sixth street.

West Third street.

6th.— *New York, New Haven & Hartford Railroad, Plymouth Division.*

Adams street.

Cedar Grove Cemetery.

Freeport street.  
Medway street.  
Savin Hill avenue.

*7th.—New York, New Haven & Hartford Railroad, Providence Division.*

Albany street. (New part.)  
Baker street, West Roxbury.  
Beech street, West Roxbury.  
Bellevue street, West Roxbury.  
Berkeley street. (New part.)  
Broadway. (New part.)  
Canterbury street, West Roxbury.  
Castle square.  
Centre and Mt. Vernon streets, West Roxbury.  
Columbus avenue. (New part.)  
Dartmouth street. (New part.)  
Gardner street, West Roxbury.  
Harrison avenue. (New part.)  
Park street, West Roxbury.  
Walworth street, West Roxbury.  
Washington street. (New part.)

RECAPITULATION OF BRIDGES.

I.	Number wholly maintained by Boston:	
	In charge of Highway Division . . . . .	55
	In charge of Highway Division and Park Department . . . . .	2
	In charge of Park Department . . . . .	17
	In charge of Public Grounds Department . . . . .	1
		— 75
II.	Number of which Boston maintains the part within its limits:	
	In charge of Highway Division . . . . .	8
	In charge of Park Department . . . . .	5
		— 13
III.	Number of which Boston pays a part of the cost of maintenance:	
	In charge of Highway Division . . . . .	4
	In charge of Commissioners for Boston and Cambridge Bridges . . . . .	7
		— 11
IV.	Number of which Boston maintains the wearing surface . . . . .	22
V.	Number maintained by Charles River Basin Commission . . . . .	1
VI.	Number maintained by Metropolitan Park Commission . . . . .	1

VII. Number maintained by railroad corporations:	
1. Boston & Albany Railroad	5
2. Boston & Maine and Boston & Albany Railroads	2
3. Boston & Maine Railroad, Eastern Division	1
4. Boston, Revere Beach & Lynn Railroad	1
5. New York, New Haven & Hartford Railroad, Midland Division	10
6. New York, New Haven & Hartford Railroad, Plymouth Division	5
7. New York, New Haven & Hartford Railroad, Providence Division	16
	— 40
Total number	<u>163</u>

LAND AND BUILDINGS IN CHARGE OF HIGHWAY DIVISION  
(BRIDGE SERVICE).

*South Yard and Stable.*— 170 Broadway extension, South Boston — 5,516 feet of land on Broadway extension and Dorchester avenue, on which is a brick building containing an office, workshop and stable.

*Atlantic Avenue Bridge.*— Draw house, motor house and tool house.

*Broadway Bridge.*— Draw house and one storehouse.

*Charlestown Bridge.*— Draw house, electrical power room and six storehouses.

*Chelsea North Bridge.*— Draw house.

*Chelsea South Bridge.*— Draw house and engine house.

*Congress Street Bridge.*— Draw house, storehouse and two shelter houses.

*Cottage Street Footbridge.*— Watchman's house.

*Dover Street Bridge.*— Draw house and two shelter houses.

*Dorchester Avenue Bridge.*— Draw house, tool shed, two motor houses, one controller house.

*L Street Bridge.*— Draw house, engine house.

*Malden Bridge.*— Draw house.

*Meridian Street Bridge.*— Draw house.

*Neponset Bridge.*— Tool house.

*Northern Avenue Bridge.*— Draw house, containing a power room and storage room for compressed air.

*Summer Street Bridge.*— Draw house, controller house, two shelter houses.

*Warren Bridge.*— Stable, draw house, containing an engine room and boiler room and a tool house.

*Western Avenue Bridge to Watertown.*— Tool house.

List of Small Bridges or Culverts having Wooden Tops, which are Repaired by Highway Division (Bridge Service).—Walls Repaired and Openings Cleaned by Sewer Division.

LOCATION.	Span, Feet.	Height of Opening, Feet.	Length, Feet.	Side Walls.	Covering.
Ashland and Canterbury streets, near Calvary Cemetery, West Roxbury....	7.6	5.5	75	Stone.	Wood.
Beech street, near Anawan avenue, at Central Station, West Roxbury.....	4.0	4.0	50	Stone.	Wood.
Cass street, near Spring Street Station, West Roxbury.....	7.0	3.0	21	Stone.	Wood.
Cohasset street, Roslindale.....	14.0	7.5	60	Stone.	Wood.
Gardner street, near Cow Island, West Roxbury.....	5.0	5.5	33	Wood.	Wood.
Jamaica street, Jamaica Plain.....	10.0	4.0	39	Stone.	Wood.
Park street, west of Dorchester avenue, Dorchester.....	5.0	3.7	50	Stone.	Wood.
Park street, west of New Haven & Hartford Railroad, Dor.....	8.5	5.0	50	Stone.	Wood.
Spring street, near Spring Street Station, West Roxbury.....	2.7	2.7	63	Stone.	Wood.
Summer street, near Spring Street Station, West Roxbury.....	4.0	4.5	40	Stone.	Wood.
Williams street, at Stony brook, West Roxbury.....	5.0	5.0	50	Wood.	Wood.
Woodman street, Jamaica Plain.....	6.3	4.0	65	Stone.	Wood.

**Table Showing the Widths of Openings for Vessels in all Bridges Provided with Draws in the City of Boston, in January, 1911.**

NAME OF BRIDGE.	Location.	Number of Openings.	Width.
Atlantic avenue.....	Over Fort Point channel.....	1	42 feet 6 inches.
Boston & Maine Railroad, Eastern Division.....	Boston to Charlestown.....	1	39 " 8 "
Boston & Maine Railroad, Eastern Division.....	Over Miller's river.....	1	35 " 10 "
Boston & Maine Railroad, Fitchburg Division.....	Boston to Charlestown.....	1	36 " 7 "
Boston & Maine Railroad, Fitchburg Division (for teaming freight).....	" " .....	1	36 " 7 "
Boston & Maine Railroad (freight), Southern Division.....	Boston to East Cambridge....	1	39 " 10 "
Boston & Maine Railroad (passenger), Southern Division.....	" " .....	1	39 " 8 "
Boston & Maine Railroad, Western Division.....	Boston to Charlestown.....	1	39 " 8 "
Boston & Maine Railroad, Western Division.....	Over Miller's river.....	1	36 " 0 "
Broadway.....	Over Fort Point channel.....	1	42 " 7 "
Cambridge street.....	Brighton to Cambridge.....	1	36 " 4 "
Charlestown (main channel).....	Boston to Charlestown.....	2	50 " 0 "
Charlestown (north channel).....	" " .....	49	9 "
Chelsea (north channel).....	Charlestown to Chelsea.....	1	60 " 0 "
Chelsea (south channel).....	" " .....	1	38 " 9 "
Chelsea street.....	East Boston to Chelsea.....	1	60 " 0 "
Commercial Point (or Tenean).....	Dorchester.....	1	24 " 2 "
Congress street.....	Over Fort Point channel.....	1	50 " 0 "
Dorchester avenue.....	" " .....	1	41 " 4 "
Dover street.....	" " .....	1	40 " 0 "
Grand Junction Railroad.....	Brighton to Cambridge.....	1	39 " 0 "
Grand Junction Railroad.....	East Boston to Chelsea.....	1	60 " 0 "
Granite.....	Dorchester to Milton.....	1	36 " 0 "
Harvard (Boston side).....	Boston to Cambridge.....	2	36 " 6 "
Harvard (Cambridge side).....	" " .....	36	10 "
L street.....	Over reserved channel, South Boston.....	1	39 " 8 "
Lock.....	Charles River Dam.....	1	45 " 0 "
Malden.....	Charlestown to Everett.....	1	50 " 0 "
Meridian street (East Boston side)....	East Boston to Chelsea.....	2	59 " 2 "

Table Showing Widths of Openings, etc.—Concluded.

NAME OF BRIDGE.	Location.	Number of Openings.	Width.
Meridian street (Chelsea side).....	East Boston to Chelsea.....	.....	59 feet 0 inches.
Neponset.....	Dorchester to Quincy.....	1	36 " 0 "
New York, New Haven & Hartford Railroad.....	Over Fort Point channel.....	1	41 " 9 "
New York, New Haven & Hartford Railroad, Y-connection.....	" " .....	1	42 " 0 "
New York, New Haven & Hartford Railroad, Plymouth Division.....	Dorchester to Quincy.....	1	51 " 0 "
North Beacon street.....	Brighton to Watertown.....	1	30 " 0 "
North Harvard street.....	Brighton to Cambridge.....	1	36 " 0 "
Northern avenue.....	Over Fort Point channel.....	2	75 " 0 "
Prison Point.....	Charlestown to Cambridge....	1	37 " 6 "
Summer street.....	Over Fort Point channel.....	1	50 " 0 "
Warren.....	Boston to Charlestown.....	1	36 " 0 "
Western avenue.....	Brighton to Cambridge.....	1	36 " 0 "
Western avenue.....	Brighton to Watertown.....	1	35 " 10 "

## Drawtenders' Reports.

Number of Vessels Passing Through the Drawbridges Controlled by the City of Boston, February 1, 1910, to January 31, 1911, Inclusive.

	STEAMERS.			SAILING VESSELS.			TUGS.			ALL OTHERS.			TOTAL NUMBER VESSELS.			TOTAL NUMBER OF CARGOES.	TOTAL NUMBER OF OPERATIONS.
	By Day.	By Night.	Total	By Day.	By Night.	Total	By Day.	By Night.	Total	By Day.	By Night.	Total	By Day.	By Night.	Total		
Atlantic avenue.....	34	11	45	805	69	874	4,192	414	4,606	1,790	123	1,913	6,821	617	7,438	1,369	3,770
Broadway.....	35	9	44	815	64	879	4,102	373	4,475	1,844	137	1,981	6,796	583	7,379	1,433	2,429
Charlestown.....	.....	.....	517	110	627	2,727	520	3,247	1,501	330	1,831	4,745	960	5,705	1,198	1,833	.....
Chelsea North.....	447	29	476	630	39	669	7,959	789	8,748	3,177	356	3,533	12,213	1,213	13,426	1,905	6,218
Chelsea South.....	4	.....	4	336	19	355	6,010	634	6,644	3,904	415	4,319	10,254	1,068	11,322	2,719	4,925
Chelsea street.....	58	7	65	46	1	47	308	26	334	117	12	129	529	46	575	135	411
Congress street.....	109	20	129	977	78	1,055	6,015	600	6,615	2,206	173	2,379	9,307	871	10,178	1,620	5,121
Dorchester avenue.....	34	12	46	802	72	874	4,204	432	4,636	1,974	134	2,108	7,014	650	7,664	1,393	4,093
Dover street.....	35	8	43	793	52	845	3,680	294	3,974	1,514	98	1,612	6,022	452	6,474	1,266	2,793
Granite.....	.....	.....	.....	.....	.....	669	.....	669	463	.....	463	1,132	.....	.....	1,132	250	602
L Street.....	.....	.....	184	47	231	2,803	316	3,119	1,939	420	2,359	4,926	783	5,709	829	3,934	.....
Malden.....	.....	.....	100	10	110	1,037	71	1,108	448	51	499	1,585	132	1,717	263	958	.....
Meridian street.....	985	196	1,181	293	28	321	7,560	1,239	8,799	2,889	453	3,342	11,727	1,916	13,643	2,296	8,125
Neponset.....	.....	.....	12	.....	12	973	.....	973	858	.....	858	1,843	.....	1,843	382	1,036	.....
North Beacon street.....	.....	.....	.....	.....	.....	10	.....	10	25	.....	25	35	.....	35	4	14	.....
Northern avenue.....	318	135	453	1,035	81	1,116	9,205	1,216	10,421	4,529	665	5,194	15,087	2,097	17,184	2,840	6,905
Summer street.....	109	20	129	977	79	1,056	6,016	602	6,618	2,204	175	2,379	9,306	876	10,182	1,618	5,140
Warren.....	10	.....	10	515	91	606	2,666	478	3,144	1,366	326	1,692	4,557	895	5,452	1,073	3,297
Western avenue to Watertown.....	.....	.....	.....	.....	.....	82	.....	82	61	.....	61	143	.....	143	25	81	.....
Totals.....	2,178	447	2,625	8,837	840	9,677	70,218	8,004	78,222	32,809	3,868	36,677	114,042	13,159	127,201	22,618	61,685

RULES AND REGULATIONS TO GOVERN THE  
OPENING OF THE DRAWS IN THE BRIDGES  
CROSSING BOSTON HARBOR, MASSACHU-  
SETTS, AND THE NAVIGABLE WATERS  
TRIBUTARY THERETO.

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THE LAW.

The River and Harbor Act of August 18, 1894, contains the following section:

SECT. 5. That it shall be the duty of all persons owning, operating, and tending the drawbridges now built, or which may hereafter be built across the navigable rivers and other waters of the United States, to open, or cause to be opened, the draws of such bridges under such rules and regulations as in the opinion of the Secretary of War the public interests require to govern the opening of drawbridges for the passage of vessels and other water crafts, and such rules and regulations, when so made and published, shall have the force of law. Every such person who shall willfully fail or refuse to open, or cause to be opened, the draw of any such bridge for the passage of a boat or boats, or who shall unreasonably delay the opening of said draw after reasonable signal shall have been given, as provided in such regulations, shall be deemed guilty of a misdemeanor, and on conviction thereof shall be punished by a fine of not more than two thousand dollars nor less than one thousand dollars, or by imprisonment (in the case of a natural person) for not exceeding one year, or by both such fine and imprisonment, in the discretion of the court: *Provided*, That the proper action to enforce the provisions of this section may be commenced before any commissioner, judge, or court of the United States, and such commissioner, judge, or court shall proceed in respect thereto as authorized by law in case of crimes against the United States: *Provided further*, That whenever, in the opinion of the Secretary of War, the public interests require it, he may make rules and regulations to govern the opening of drawbridges for the passage of vessels and other water crafts, and such rules and regulations, when so made and published, shall have the force of law, and any violation thereof shall be punished as hereinbefore provided.

THE RULES AND REGULATIONS.

In accordance with the law above quoted, the following rules and regulations are prescribed to govern the open-

ing of the draws in the bridges crossing Boston Harbor, and the navigable waters tributary to the said harbor.

*Bridges without Closed Hours.*

1. The draw in each and every bridge hereafter named in this paragraph shall, upon the signal prescribed in paragraph 7 below being given, be opened promptly at all hours for the passage of any vessel or vessels or other water craft not able to pass underneath it: *Provided*, That when the draw in any of the said bridges shall have been open for ten (10) minutes or longer, it may be closed for the crossing of trains, cars, vehicles or individuals if any be waiting to cross, and after being so closed for ten (10) minutes or for such shorter time as may be necessary for the said trains, cars, vehicles or individuals to cross, it shall be again opened promptly for the passage of vessels or other water craft if there be any such desiring to pass. The requirements of this paragraph shall apply to each and every one of the following-named bridges, so called, to wit:

*Across Chelsea Creek or Chelsea River.*— Meridian Street Bridge, Chelsea Street Bridge and Grand Junction Railroad Bridge.

*Across Mystic River.*— Wellington Bridge.

*Across Malden River.*— Malden River Bridge on Revere Beach Parkway and Medford Street Bridge at Malden.

*Across Charles River.*— Grand Junction Railroad Bridge, Cambridge Street Bridge, Western Avenue Bridge, North Harvard Street Bridge, Arsenal Street (Western Avenue) Bridge and North Beacon Street (Market Street) Bridge.

*Across Reserved Channel.*— L Street Bridge, South Boston.

*Across Neponset River.*— New York, New Haven & Hartford Railroad Bridge, Neponset Avenue Bridge and Granite Bridge.

*Across Weymouth Fore River.*— Quincy Point Bridge and East Braintree Bridge.

*Across Weymouth Back River.*— Hingham Bridge.

*Across Crystal Cove.*— Boston, Revere Beach & Lynn Railroad Bridge.

*Across Tenean Creek.*— Commercial Point or Tenean Bridge.

*Bridges with Closed Hours.*

2. Between the hours of 9 a. m. and 4.30 p. m., and between the hours of 7 p. m. and 6.30 a. m. on week days, and at all hours on Sundays, and on legal holidays observed in the locality, the draws in each and every bridge hereafter named in this paragraph shall, upon the signal prescribed in paragraph 7 below being given, be opened

promptly for the passage of any vessel or vessels or other water craft not able to pass underneath it: *Provided*, That when the draw in any of the said bridges shall have been open for ten (10) minutes or for such shorter period as may be necessary for the passage of vessels or other water craft desiring to pass, between the hours aforesaid, it shall be closed for the crossing of trains, cars, vehicles or individuals if any be waiting to cross, and after being so closed for ten (10) minutes or for such shorter time as may be necessary for the said trains, cars, vehicles or individuals to cross, it shall be again opened promptly for the passage of vessels or other water craft if there be any such desiring to pass. Between the hours of 6.30 a. m. and 9 a. m., and between the hours of 4.30 p. m. and 7 p. m., the draws in the bridges hereafter named in this paragraph shall not be required to be opened on week days for the passage of any vessel, vessels or other water craft excepting during the periods between 7.05 a. m. and 7.15 a. m., between 8 a. m. and 8.10 a. m., between 5.20 p. m. and 5.30 p. m., and between 6.20 p. m. and 6.30 p. m., and excepting also as provided in paragraphs 4, 5 and 11 of these rules and regulations. The requirements of this paragraph shall apply to each and every one of the following-named bridges, so called, to wit:

*Across Mystic River.*—Chelsea Bridge South, Chelsea Bridge North, Malden Bridge, Boston & Maine (Eastern Division) Railroad Bridge and Boston & Maine (Western Division) Railroad Bridge.

*Across Charles River.*—Harvard Bridge.

*Across Fort Point Channel.*—Northern Avenue Bridge, Congress Street Bridge and Summer Street Bridge.

3. Between the hours of 9.10 a. m. and 4.15 p. m. and between the hours of 7.40 p. m. and 6.15 a. m. on week days, and at all hours on Sundays, and on legal holidays observed in the locality, the draws in each and every bridge hereafter named in this paragraph shall, upon the signal prescribed in paragraph 7 below being given, be opened promptly for the passage of any vessel or vessels or other water craft not able to pass underneath it: *Provided*, That when the draw in any of the said bridges shall have been opened for ten (10) minutes or for such shorter period as may be necessary for the passage of vessels or other water craft desiring to pass, between the hours aforesaid, it shall be closed for the

crossing of trains, cars, vehicles or individuals, if any be waiting to cross, and after being so closed for ten (10) minutes or for such shorter time as may be necessary for the said trains, cars, vehicles or individuals to cross, it shall be again opened promptly for the passage of vessels or other water craft, if there be any such desiring to pass. Between the hours of 6.15 a. m. and 9.10 a. m. and between the hours of 4.15 p. m. and 7.40 p. m., the draws in the bridges hereafter named in this paragraph shall not be required to be opened on week days for the passage of any vessel, vessels or other water craft excepting that when the tide is high at Charlestown Navy Yard between 6.15 a. m. and 9.10 a. m., the drawbridges hereafter named in this paragraph shall be opened for a period between 6.15 a. m. and 9.10 a. m. not exceeding ten (10) minutes and within forty-five (45) minutes before or after said high tide for the passage of all vessels or other water craft when of a draft of twelve (12) feet or over, if there be any such desiring to pass; the exact time of opening within the prescribed limits of 45 minutes before and after said high tide to be prescribed by the railroad companies, due regard being had for causing minimum interference with railroad schedules, highway traffic, and the interests of navigation. The opening time of each bridge shall be so fixed as to permit continuous passage through the next and following bridges located in direction of course of vessel or other water craft.

*Across Charles River.*—Charlestown Bridge, Warren Bridge, Boston & Maine (formerly Fitchburg) Railroad Bridge, for teams, Boston & Maine (formerly Fitchburg) Railroad Bridge, Boston & Maine Railroad Bridge, Boston & Maine (formerly Eastern) Railroad Bridge, Boston & Maine (formerly Lowell Passenger) Railroad Bridge, Boston & Maine (formerly Lowell Freight) Railroad Bridge, Craigie Temporary Bridge, Boston Elevated Railway Bridge and Charles River Dam Bridge.

*Across Fort Point Channel.*—Dorchester Avenue Bridge, Atlantic Avenue (Cove Street) Bridge, New York, New Haven & Hartford Railroad Bridge, New York, New Haven & Hartford (Y connection) Railroad Bridge, Broadway Bridge, Dover Street Bridge and New York, New Haven & Hartford (South Bay Junction) Railroad Bridge.

4. The draw in Chelsea Bridge North shall, upon the signal prescribed in paragraph 7 below being given,

be opened promptly at all hours for the passage of any vessel, vessels or other water craft whose draft is eighteen (18) feet or more; and any vessel, vessels or other water craft proceeding upstream that during any of the periods on week days from 7.05 a. m. to 7.15 a. m., 8 a. m. to 8.10 a. m., 5.20 p. m. to 5.30 p. m., and 6.20 p. m. to 6.30 p. m., shall have passed through Chelsea Bridge North, or through any other bridge across Mystic River between Chelsea Bridge North, and Boston & Maine (Western Division) Railroad Bridge, shall be passed promptly on signal through each and all of the bridges located upstream from Chelsea Bridge North, the provisions of paragraph 2 of these rules and regulations to the contrary notwithstanding; and any vessel, vessels or other water craft proceeding downstream that during any of the aforesaid periods shall have passed through Boston & Maine (Western Division) Railroad Bridge or through any other bridge across Mystic River between Boston & Maine (Western Division) Railroad Bridge and Chelsea Bridge North shall be passed promptly on signal through each and all of the bridges located downstream from Boston & Maine (Western Division) Railroad Bridge, the provisions of paragraph 2 of these rules and regulations to the contrary notwithstanding.

5. The draws in Northern Avenue Bridge, Congress Street Bridge and Summer Street Bridge shall, upon the signal prescribed in paragraph 7 below being given, be opened promptly at all hours for the passage of any vessel, vessels, or other water craft whose draft is eighteen (18) feet or more.

Any vessel, vessels or other water craft proceeding upstream through Northern Avenue Bridge shall be afforded continuous passage through Congress Street Bridge and Summer Street Bridge; and any vessel, vessels or other water craft proceeding downstream through Summer Street Bridge shall be afforded continuous passage through Congress Street Bridge and Northern Avenue Bridge, the provisions of paragraph 2 of these rules and regulations to the contrary notwithstanding.

#### GENERAL RULES.

6. The length of time that a draw has been open shall be computed from the time that the draw span begins

to move in opening, and the length of time that a draw has been closed shall be computed from the time that the draw span ceases to move in closing.

7. When a vessel or other water craft intends to pass through the draw of one of the bridges covered by these rules and regulations, the master or pilot of the vessel or craft shall, on approaching within signalling distance, signify his intention to pass through the bridge by sounding with a whistle or horn the signal prescribed below, viz.:

#### *General Signals.*

For Meridian Street Bridge: Two (2) long blasts followed immediately by two (2) short blasts and one (1) long blast.

For all other bridges: Two (2) long blasts followed immediately by two (2) short blasts.

#### *Special Signals.*

For Chelsea Bridge North, by vessels drawing eighteen (18) feet or more: Four (4) long blasts.

For Northern Avenue, Congress Street and Summer Street Bridges, by vessels drawing eighteen (18) feet or more: Four (4) long blasts.

The signal given by a master or pilot shall be immediately answered from the bridge by three (3) long blasts of a whistle or horn unless under these rules and regulations a delay in opening the draw is permitted, and in case of such a delay the signal shall be immediately answered by two (2) long blasts. A long blast of a whistle or horn as herein provided shall continue for three (3) seconds and a short blast for one (1) second.

8. Upon hearing or perceiving the signals prescribed in paragraph 7, or upon verbal request from the master or pilot of any vessel or other water craft waiting at the bridge, the tender or operator of the draw of the bridge signalled shall at once open the draw for the prompt passage of any vessel or other water craft unless under these rules and regulations a delay in opening the draw is permitted: *Provided*, That the draw may not be opened if there is a train, car or other vehicle at the time passing over said draw, or if a train or car is approaching so closely that it cannot be safely stopped before reaching

the draw, but the draw shall be opened as soon as it can be cleared, and no person, vehicle, car or train shall be permitted to begin to cross the draw after it has been signalled to open, excepting as herein provided.

9. Trains, cars, vehicles, or persons shall not be stopped on any draw span for the purpose of delaying the opening of the draw, nor shall any vessel or other water craft be so handled or placed as to delay the opening or closing of any draw span, but all passage over, under or through a draw span shall be prompt so as to reduce delays to water and bridge traffic to a minimum. Upon notice from the Secretary of War so to do, the owner or owners of any bridge whose draw is held closed as authorized in paragraph 2 of these rules and regulations shall station and maintain at such bridge a tug to aid vessels and other water craft in passing expeditiously through the draw thereof.

10. The owner or owners of every bridge covered by these rules and regulations shall maintain in good and efficient order the draw span and the machinery and appliances for operating the same and for assisting vessels while passing through the draw. The said owner or owners shall also provide and maintain at the draw span such number of drawtenders or operators as may be necessary to open and close the same promptly; and they shall also provide and maintain in good order on the bridge piers or fenders such fixtures as may be necessary to vessels in mooring or making fast while waiting for the draw span to open.

11. These rules and regulations shall not apply to steam vessels owned or leased by the United States, nor shall they apply to vessels employed by the City of Boston or other municipality for police and fire protection. All such United States and municipal vessels shall be passed without delay through the draws of all bridges, at any hour of the day or night, upon signalling by four (4) long blasts of the whistle.

12. These rules and regulations shall take effect on May 12, 1910, and all regulations or parts of regulations in conflict therewith are hereby revoked to take effect on that date.

J. M. DICKINSON,

*Secretary of War.*

WAR DEPARTMENT, May 12, 1910.

## HIGHWAY DIVISION (PAVING SERVICE).

The following is a description of the most important work done during the year under the supervision of the Chief Engineer:

*Charles street*, from Boylston street across Beacon street, about 1,427 feet in length, was repaved with special five (5) inch granite blocks on a six (6) inch Portland cement concrete base with pitch and pebble joints, by Coleman Brothers, under contract, who also did the excavating and regulating. Part of the old paving blocks were hauled by the contractor to Harvard avenue, Brighton, part to the Massachusetts avenue lot, a small amount to Dartmouth street and the balance to District No. 3 Yard and District No. 4 Yard. The edgestone and sidewalk bricks were furnished by the city on the line of the work. All the other materials were furnished by the contractor. The track area was paved by the Boston Elevated Railway Company. The former surface was granite blocks on a gravel base with pitch and pebble joints.

*Dorchester avenue*, between Mt. Washington avenue and Dorchester avenue bridge, about 917 feet in length, was repaved with the existing granite blocks on a gravel base with gravel joints, by Thomas Kiernan, under contract, who also did the regulating. The former pavement was granite blocks on a gravel base with pitch joints.

*North Market street*, from Merchants row to Commercial street, about 645 feet in length, was repaved with large granite blocks on a six (6) inch Portland cement concrete base, with pitch and pebble joints, by C. W. Dolloff & Co., under contract, who also did the excavating and regulating. The old paving blocks, crossing blocks and flagging were hauled by the contractor to the South Yard, Albany street. The edgestones and sidewalk bricks were furnished by the city on the line of the work. All the other materials necessary for the paving were furnished by the contractor. The former pavement was granite blocks on a gravel base with gravel joints.

*Washington street*, from Green street to the Arborway, is about 3,442 feet in length. Work was commenced on this street in 1909 and was completed this year. The roadway was paved with special five (5) inch granite blocks on a six (6) inch Portland cement concrete base with pitch and pebble joints. This work was done under contract by John F. O'Connell, who also did the excavating and regulating. The old gutter blocks, cobblestones and crossing blocks were hauled to the Rosemary Street Yard by the contractor. The new paving blocks and sidewalk bricks were furnished by the city on the line of the work. The new straight edgestone was furnished by the city at the South Yard and hauled by the contractor.

All the other materials were furnished by the contractor. The track area was paved with large granite blocks on a concrete base with pitch and pebble joints by the Boston Elevated Railway Company. The former surface was macadam.

*Washington street*, from the northerly side of the Arborway to beyond the New York, New Haven & Hartford Railroad, about 1,445 feet in length, was paved with special granite blocks, five (5) inches in depth, on a six (6) inch Portland cement concrete base, with pitch and pebble joints. This work was done under contract by James Doherty, who also did the excavating and regulating. The new straight edge-stone was furnished by the city at the South Yard and hauled by the contractor. The circular edgestone and sidewalk bricks were furnished by the city on the line of the work. All the other materials were furnished by the contractor. The old flagging and gutter blocks were hauled to the Child Street Yard by the contractor. The track area was repaved with large granite blocks on a concrete base, with pitch and pebble joints, by the Boston Elevated Railway Company. The former surface of this street was macadam.

#### ASPHALT.

*Doane street*, from Broad street about 130 feet westerly, was resurfaced by the Barber Asphalt Paving Company, under a three (3) year maintenance guarantee, with one and one-half ( $1\frac{1}{2}$ ) inches of Trinidad asphalt wearing surface and one and one-half ( $1\frac{1}{2}$ ) inches of bituminous concrete binder upon the existing concrete base, which was cleaned off and brought to within three (3) inches of the finished surface of the roadway with Portland cement concrete. The regulating of the cross-walks and paving at Broad street was done by the contractor. This work was necessitated by settlements due to building operations. The former surface was Trinidad asphalt on a six (6) inch Portland cement concrete base.

*Kingston street*, from Essex street to Beach street, about 492 feet in length, was resurfaced by the Barber Asphalt Paving Company, under a five (5) year maintenance guarantee, with one and one-half ( $1\frac{1}{2}$ ) inches of Trinidad asphalt wearing surface and one and one-half ( $1\frac{1}{2}$ ) inches bituminous concrete binder, upon the existing concrete base, which was cleaned off and brought to within three (3) inches of the finished surface of the roadway with Portland cement concrete. The cross-walks at Essex and Beach streets were repaved with pitch and pebble joints by the contractor, who also did the regulating. The new paving blocks and flagging were furnished by the city on the line of the work. The former surface of this street was Sicilian rock asphalt.

*Parkman street*, from North Russell street to Blossom street, about 239 feet in length, was paved by the Warren Brothers Company, under a five (5) year maintenance guarantee, with

one and one-half ( $1\frac{1}{2}$ ) inches of Acme asphalt wearing surface and one and one-half ( $1\frac{1}{2}$ ) inches of bituminous concrete binder on a six (6) inch Portland cement concrete base. The contractor also did the excavating and regulating. The new paving blocks, flagging and sidewalk bricks were furnished by the city on the line of the work. All the other materials were furnished by the contractor. The old paving blocks and flagging were hauled by the contractor to the Massachusetts avenue lot. The former pavement was granite blocks on a gravel base.

*Massachusetts avenue*, southerly roadway, from Columbus avenue to Washington street, about 1,843 feet in length, was resurfaced by the Warren Brothers Company, under a five (5) year maintenance guarantee, with one and one-half ( $1\frac{1}{2}$ ) inches of Acme asphalt wearing surface and one and one-half ( $1\frac{1}{2}$ ) inches of bituminous concrete binder. Bituminous binder was used to make up the irregularities in the existing concrete base with the exception of a portion from Tremont street, about 100 feet easterly, which, on account of a change in grade, was removed and replaced with a new Portland cement concrete base. The contractor did the excavating and regulating. The new edge-stone, sidewalk bricks and granite blocks were furnished by the city on the line of the work. All the other materials were furnished by the contractor. The former surface of this street was Trinidad asphalt.

#### WOOD BLOCK PAVING.

*Harvard street*, from Washington street to Harrison avenue, about 414 feet in length, was paved with wood blocks on a six (6) inch Portland cement concrete base, with grout bed and joints, by J. H. McCarthy, under a five (5) year maintenance guarantee. The excavating and regulating were done by the contractor. The old granite blocks and flagging were hauled to the South Yard and to Forbes street by the contractor. The new granite blocks and sidewalks bricks were furnished by the city on the line of the work. All the other materials were furnished by the contractor. The former pavement was granite blocks on a gravel base with gravel joints.

*Milk street*, between Pearl and Oliver streets; *Pearl street*, from Milk street about 148 feet southerly and *Oliver street*, from Milk street about 153 feet southerly, in all about 664 feet in length, were paved with wood blocks on Portland cement concrete base, with grout bed and joints, by James Doherty, under a five (5) year maintenance guarantee. The old concrete base was built up with new concrete to the proper subgrade. The contractor did the excavating and regulating. The old paving blocks were hauled to the South Yard by the contractor. All the new materials were furnished by the contractor. In connection with this work, *Milk street*, between Oliver and *Battery-march streets*, and parts of *Post Office square* were

repaved with the old granite blocks on the existing concrete base, with pitch and pebble joints. The former pavement of Milk street, from Pearl to Oliver streets, and of Pearl street, was granite blocks on a concrete base, with cement grout joints. Milk street, from Oliver to Batterymarch streets, and Oliver street were formerly paved with granite blocks on a concrete base with pitch and pebble joints.

#### BRICK BLOCK PAVING.

*Dudley street*, from Harrison avenue to Magazine street, about 2,685 feet in length, was paved with Mack brick blocks on a six (6) inch Portland cement concrete base, with grout joints, by James Doherty, under a five (5) year maintenance guarantee. The contractor also did the excavating and regulating. The track area was paved by the Boston Elevated Railway Company with the same materials as the rest of the street. The new edgestone and sidewalk bricks were furnished by the city on the line of the work. All the other new materials were furnished by the contractor. The old granite blocks were hauled to the Dimock Street Yard and the Massachusetts avenue lot by the contractor. The former surface of the street was granite blocks on a gravel base.

*Damrell street*, from Dorchester avenue to Old Colony avenue, about 1,008 feet in length, was paved with Mack brick blocks. (See Assessment streets.)

*Hancock street*, from Columbia road to Winter street, is about 2,290 feet in length. The contract for paving this street with Mack brick blocks on a six (6) inch Portland cement concrete base, with grout joints, was awarded to the Central Construction Company. The westerly side of the street for its entire length and easterly side for a distance of about 700 feet have been paved this season. Work will be resumed in the spring. The new edgestone was furnished by the city on the line of the work. All the other new materials were furnished by the contractor, who also did the excavating and regulating and hauled the old paving blocks to the Hancock Street Yard. The westerly track of the Boston Elevated Railway Company was paved by that company with the same material as the rest of the street. The street will be completed during the coming year.

*Heath street*, from South Huntington avenue to Parker street, about 3,079 feet in length, was paved with Mack brick blocks on a six (6) inch Portland cement concrete base, with cement grout joints, by Field, Barker and Underwood, Inc., under a five (5) year maintenance guarantee. The contractor also did the excavating and regulating. Granite blocks on a six (6) inch concrete base, with cement grout joints, were substituted for the brick blocks from the westerly part of Lawn street to about 65 feet west of Lawn street. The granite blocks were furnished by the city and hauled by the contractor. The flagging and

sidewalk bricks were furnished by the city on the line of the work. All the other materials were furnished by the contractor. The old granite blocks, flagging and cobblestones were hauled to the Dimock Street Yard by the contractor. The former surface of the street was macadam.

*Longwood avenue*, between Huntington avenue and Brookline avenue, about 2,138 feet in length, was paved with Mack brick blocks on a six (6) inch Portland cement concrete base, with grout joints, by Field, Barker and Underwood, Inc., under a five (5) year maintenance guarantee. A portion of the roadway, about 50 feet in length, at Huntington avenue, was paved with granite blocks on a six (6) inch Portland cement concrete base with grout joints. The contractor also did the excavating and regulating. The new straight edgestone, flagging and granite blocks were furnished by the city and hauled by the contractor. The sidewalk bricks and circular edgestone were furnished by the city on the line of the work. The former surface of the street was macadam.

*Seneca street*, from Harrison avenue to Albany street, about 509 feet in length, was paved with Mack brick blocks on a six (6) inch Portland cement concrete base, with grout joints, by the Paving Service forces. All the materials were furnished by the city.

#### ASSESSMENT STREETS.

The following streets have been constructed or are in the process of construction under the provisions of chapter 393 of the acts of 1906 and the acts in amendment or in addition thereto:

*Addison street*, from Saratoga street across Pope street, is about 1,446 feet in length. The contract for constructing the surface of this street was awarded to James Doherty November 26, 1910. Work was begun November 28, 1910, and suspended December 28, 1910. The work done this year consisted in placing filling. Work will be resumed early in the spring.

*Aldrich street*, from Belgrade avenue to Beech street, is about 1,754 feet in length. The contract for constructing the surface of this street was awarded to the West Roxbury Trap Rock Company April 30, 1910. Work was begun May 4, 1910, and completed October 1, 1910. It is a forty (40) foot street with granite edgestone at the street corners; has a six (6) inch macadam roadway, four (4) foot granite block dish gutters, flagging crosswalks and artificial stone sidewalks, four and one-half ( $4\frac{1}{2}$ ) feet in width, and seeded loam spaces one and one-half ( $1\frac{1}{2}$ ) feet in width. The straight edgestone and flagging were furnished by the city and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. All the other materials were furnished

by the contractor. The artificial stone sidewalks were laid under a five (5) year maintenance guarantee. Underdrains were laid, connecting the cinder foundations of the walks with the catch-basins, the object being to prevent the accumulation of water at the low end of the walks and a consequent upheaval which might be occasioned by the action of frost in the ground.

*Alpha road*, from Waldeck street to Park street, is about 958 feet in length. The contract for constructing the surface of this street was awarded to James Doherty May 13, 1910. Work was begun June 8, 1910, and completed August 15, 1910. It is a fifty (50) foot street, with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and seven (7) foot sidewalks, consisting of an artificial stone sidewalk four and one-half ( $4\frac{1}{2}$ ) feet wide, and a seeded loam space two (2) feet wide. On a part of the street artificial stone sidewalks had been built previous to the present construction. Such of these as were in good condition and conformed to the present construction were allowed to remain. About 260 linear feet of the edgestone was set on a concrete base. The flagging was furnished by the city and hauled by the contractor. All the other materials were furnished by the contractor.

*Antrim street*, from Bennington to Ashley streets, is about 341 feet in length. The contract for constructing the surface of this street was awarded to J. H. McCarthy June 27, 1910. Work was begun June 30, 1910, and completed November 1, 1910. It is a forty (40) foot street, with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and brick sidewalks, seven (7) feet in width. The circular edgestone and sidewalk bricks were furnished by the city on the line of the work. All the other materials were furnished by the contractor.

*Avenue Louis Pasteur*, from Longwood avenue to the Fenway, is about 1,354 feet in length. The contract for constructing the surface of this street was awarded to James Doherty October 20, 1909. Work was begun October 28, 1909, when the loam spaces were excavated and the loam placed, and on December 24, 1909, work was suspended for a few days. Work was completed July 8, 1910. This street is for the greater part 100 feet wide, with an eight (8) inch tar macadam roadway and three (3) foot vitrified brick gutters. The Longwood avenue end is constructed in the form of a circle of ninety-three (93) foot radius, with a loam space twenty (20) feet in diameter, surrounded by an artificial stone walk ten (10) feet wide, laid under a five (5) year maintenance guarantee. The roadway of the circle is paved with vitrified brick on a six (6) inch Portland cement concrete base with grout joints. The edgestone is similar to that used by the Park Department. The crosswalks are vitrified brick on a six (6) inch Portland cement concrete base with grout joints and protected on the edges by

granite blocks. The sidewalks are twenty-five (25) feet wide, consisting of a loam space fifteen (15) feet wide and crushed stone ten (10) feet in width. This loam space is widened at intervals of twenty (20) feet to form pits for the planting of trees. At these points five (5) feet of the crushed stone walk overlay the loam space. The edgestone and sidewalk bricks were furnished by the city on the line of the work. The granite paving blocks were furnished by the city at the South Yard, and hauled by the contractor. All the other materials were furnished by the contractor.

*Alther street*, from Hampden to Reading streets, is about 258 feet in length. The contract for constructing the surface of this street was awarded to James Doherty April 26, 1910. Work was begun April 26, 1910, and completed May 9, 1910. It is an eighteen (18) foot street with a six (6) inch macadam roadway, with two and one-half ( $2\frac{1}{2}$ ) foot granite block gutters, granite edgestone and brick sidewalks, two and one-half ( $2\frac{1}{2}$ ) feet in width. The paving blocks, edgestone and flagging were furnished by the city and hauled by the contractor. The sidewalk bricks were furnished by the city on the line of the work. All the other materials were furnished by the contractor.

*Balfour street*, from Wayland to Dalkeith streets, is about 339 feet in length. The contract for constructing the surface of this street was awarded to Joseph B. O'Rourke & Co., May 13, 1910. Work was begun July 30, 1910, and completed September 20, 1910. It is a forty (40) foot street, with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone, and seven (7) foot artificial stone sidewalks, laid under a five (5) year maintenance guarantee. The flagging was furnished by the city and hauled by the contractor. All the other materials were furnished by the contractor.

*Bucknam street*, from Lawn street to Fisher avenue, is about 394 feet in length. The contract for constructing the surface of this street was awarded to J. C. Coleman & Sons Company August 17, 1910. Work was begun November 22, 1910, and suspended December 7, 1910. This is, for the greater part, a forty (40) foot street, and is to have a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and crushed stone sidewalks, seven (7) feet in width. The work done this year consisted of excavating and setting the edgestone, which was furnished by the contractor. The work will be resumed early in the spring.

*Colberg avenue*, from Belgrade avenue to Beech street, is about 1,530 feet in length. The contract for constructing the surface of this street was awarded to the West Roxbury Trap Rock Company, April 30, 1910. Work was begun May 12, 1910, and completed November 1, 1910. It is a forty (40) foot street, with granite edgestone at the street corners, has a six (6) inch macadam roadway, four (4) foot granite block dish gutters,

flagging crosswalks and artificial stone sidewalks, four and one-half ( $4\frac{1}{2}$ ) feet in width. The straight edgestone and flagging were furnished by the city and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. All the other materials were furnished by the contractor. The artificial stone sidewalks were laid under a five (5) year maintenance guarantee. Underdrains were laid, connecting the cinder foundations of the walks with the catch-basins, the object being to prevent the accumulation of water at the low end of the walks and a consequent upheaval which might be occasioned by the action of frost in the ground.

*Clarkwood street*, from Blue Hill avenue to Norfolk street, is about 1,020 feet in length. The contract for constructing the surface of this street was awarded to James H. McCarthy May 13, 1910. Work was begun September 29, 1910, and suspended December 3, 1910. This street is practically completed, as all that remains to be done is a small area of artificial stone sidewalk to be laid. It is a forty (40) foot street, with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and a seven (7) foot sidewalk, consisting of a four (4) foot artificial stone walk and a loam space. On a part of this street the artificial stone walks had been built, and, as they were found to be nearly to grade, they were allowed to remain. Work will be resumed in the spring. The flagging was furnished by the city and hauled by the contractor. All the other materials were furnished by the contractor.

*Damrell street*, from Dorchester avenue to Old Colony avenue, is about 1,008 feet in length. A contract for constructing the surface of this street was awarded to the Central Construction Company August 19, 1910. Work was begun August 20, 1910, and completed November 30, 1910. It is a forty (40) foot street with a Mack brick block roadway from Dorchester avenue to Ames street, a distance of about 560 feet and a granite block roadway from Ames street to Old Colony avenue, granite edgestone and seven (7) foot brick and artificial stone sidewalks. The granite blocks and flagging were furnished by the city and hauled by the contractor. The sidewalk bricks were furnished by the city on the line of the work. All the other materials were furnished by the contractor. The artificial stone sidewalks were laid by Warren Brothers Company under a five (5) year maintenance guarantee.

*Deaconess road*, from Brookline avenue to Bellevue street, is about 257 feet in length. The contract for constructing the surface of this street was awarded to J. C. Coleman & Sons Company May 17, 1910. Work was begun May 23, 1910, and completed July 22, 1910. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and seven (7) foot artificial stone sidewalks. These sidewalks were laid under

a five (5) year maintenance guarantee. The flagging was furnished by the city and hauled by the contractor. All the other materials were furnished by the contractor.

*Edgar street*, from Parker to Mechanic streets, is about 178 feet in length. The contract for constructing the surface of this street was awarded to William J. Rafferty & Co., April 15, 1910. Work was begun July 9, 1910, and completed August 17, 1910. It is a thirty (30) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and five (5) foot artificial stone sidewalks, laid under a five (5) year maintenance guarantee. The paving blocks and flagging were furnished by the city and hauled by the contractor. The edgestone was furnished by the city on the line of the work. All the other materials were furnished by the contractor.

*Farquhar street*, from South street across Selwyn street, is about 718 feet in length. The contract for constructing the surface of this street was awarded to Thomas F. Minton April 8, 1910. Work was begun April 21, 1910, and completed July 22, 1910. It is a forty (40) foot street, with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and artificial stone sidewalks, seven (7) feet in width. The straight edgestone and flagging were furnished by the city and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. All the other materials were furnished by the contractor.

*Hyde Park avenue*, from about 300 feet north of Ashland street to the Hyde Park line, is about 2,224 feet in length. The contract for constructing the surface of this street was awarded to the West Roxbury Trap Rock Company September 14, 1909. Work was begun September 20, 1909, and completed November 16, 1910. It is an eighty (80) foot street with a double car track. It has a six (6) inch macadam roadway each side of the tracks, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and crushed stone sidewalks, thirteen (13) feet in width. On account of the change in grade of this avenue it was necessary to regulate Ashland street for about 288 feet and Canterbury street for about 150 feet southeast from Hyde Park avenue. Ashland street is a fifty (50) foot street with a double car track. It was constructed with a six (6) inch macadam roadway each side of the car tracks, four (4) foot granite block dish gutters and crushed stone sidewalks, seven (7) feet in width. Canterbury street is a forty (40) foot street and was constructed with a six (6) inch macadam roadway, four (4) foot granite block dish gutters and crushed stone sidewalks, six (6) feet in width. The straight edgestone was furnished by the city and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. All the other materials were furnished by the contractor.

*Howe street*, from Hancock street to about 657 feet southwest-

erly. The contract for constructing the surface of this street was awarded to James Doherty April 26, 1910. Work was begun May 12, 1910, and completed June 23, 1910. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and a seven (7) foot sidewalk consisting of a four and one-half ( $4\frac{1}{2}$ ) foot artificial stone walk and a seeded loam space. The straight edgestone was furnished by the city and hauled by the contractor. The flagging was furnished by the city on the line of the work. All the other materials were furnished by the contractor. The sidewalks were laid under a five (5) year maintenance guarantee.

*Kempton street*, from Huntington avenue to Fenwood road, is about 609 feet in length. The contract for constructing the surface of this street was awarded to J. C. Coleman Sons Company May 6, 1910. Work was begun June 4, 1910, and completed July 25, 1910. This street varies from forty-five (45) to fifty (50) feet in width. It has a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite and artificial stone edgestone and eight (8) foot artificial stone sidewalks. The existing artificial stone sidewalks were relaid in part and the balance allowed to remain. New artificial stone sidewalks were laid where none formerly existed. These sidewalks were laid under a five (5) year maintenance guarantee. The necessary sidewalk brick and flagging were furnished by the city on the line of the work. All the other materials were furnished by the contractor.

*Kingsdale street*, from Wales street about 250 feet easterly. The contract for constructing the surface of this street was awarded to Joseph B. O'Rourke & Co. April 8, 1910. Work was begun April 20, 1910, and completed July 11, 1910. It is a fifty (50) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and eight (8) foot artificial stone sidewalks, laid under a five (5) year maintenance guarantee. The straight edgestone, flagging and paving blocks were furnished by the city and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. All the other materials were furnished by the contractor.

*Leon street*, from Ruggles to Greenleaf streets, is about 891 feet in length. The contract for constructing the surface of this street was awarded to James Doherty September 8, 1910. Work was begun October 10, 1910, and suspended November 28, 1910. It is a thirty (30) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and, when completed, will have artificial stone sidewalks, five (5) feet in width. The edge-stone, gutters and roadway have been practically completed; the cinder foundation for the artificial stone sidewalks has been placed and the artificial stone will be laid as early in the

coming spring as possible. The granite blocks and flagging were furnished by the city and hauled by the contractor. All the other materials were furnished by the contractor.

*Meehan street*, from Williams street to Rossmore road, is about 420 feet in length. The contract for constructing the surface of this street was awarded to James Doherty May 6, 1910. Work was begun June 16, 1910, and completed July 13, 1910. It is a twenty (20) foot street with a six (6) inch macadam roadway, two and one-half ( $2\frac{1}{2}$ ) foot granite block gutters, flagging crosswalks, granite edgestones, one brick sidewalk five (5) feet wide and one gravel sidewalk one (1) foot wide. The straight edgestone was furnished by the city, part was hauled by the contractor and part delivered on the line of the work. The circular edgestone and sidewalk brick were furnished by the city on the line of the work. The flagging was furnished by the city and hauled by the contractor. All the other materials were furnished by the contractor.

*Marbury terrace*, from Amory street to the New York, New Haven & Hartford Railroad, is about 346 feet in length. The contract for constructing the surface of this street was awarded to James Doherty October 18, 1909. Work was begun November 15, 1909. The edgestone was set, the gutters paved and the cinder foundation for the sidewalks placed and work was then suspended on December 6, 1909. Work was resumed March 23, 1910, and the macadam surface placed, artificial stone sidewalks and the flagging crosswalks laid. Work was completed April 13, 1910. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and artificial stone sidewalks seven (7) feet in width. The edgestone was furnished by the city and hauled by the contractor. All the other materials were furnished by the contractor. The artificial stone sidewalks were laid under a five (5) year maintenance guarantee.

*Mechanic street*, from Ruggles to Edgar streets, is about 169 feet in length. The contract for constructing the surface of this street was awarded to William J. Rafferty & Co. April 15, 1910. Work was begun July 9, 1910, and completed August 17, 1910. It is a thirty (30) foot street, with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and artificial stone sidewalks, laid under a five (5) year maintenance guarantee. The straight edgestone, flagging and paving blocks were furnished by the city and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. All the other materials were furnished by the contractor.

*Mora street*, from Washington street to Milton avenue, is about 1,259 feet in length. The contract for constructing the surface of this street was awarded to Joseph B. O'Rourke & Co. April 15, 1910. Work was begun June 3, 1910, and completed October 3, 1910. It is a forty (40) foot street with

a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and sidewalks seven (7) feet in width, consisting of artificial stone four and one-half ( $4\frac{1}{2}$ ) feet in width, and a seeded loam space two and one-half ( $2\frac{1}{2}$ ) feet in width. These sidewalks were laid under a five (5) year maintenance guarantee. About two hundred (200) linear feet of existing artificial stone sidewalks were allowed to remain. The flagging was furnished by the city and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. The straight edgestone was furnished by the city,—part being hauled by the contractor and the balance delivered on the line of the work. All the other materials were furnished by the contractor.

*Penhallow street*, from Melville avenue to Mather street, is about 316 feet long. The contract for constructing the surface of this street, with the exception of the artificial stone sidewalks, was awarded to Frank H. Cowin Company July 15, 1909. Work was begun October 27, 1909, and suspended December 14, 1909. Work was resumed April 25, 1910, and completed May 10, 1910. The work done this season consisted in placing and seeding loam spaces. The contract for constructing the artificial stone sidewalks was awarded to James Doherty July 15, 1909. Work was begun April 13, 1910, and completed April 23, 1910. These sidewalks, which are four (4) feet in width, were laid under a five (5) year maintenance guarantee.

*Plainfield street*, from Rossmore road to Williams street, is about 251 feet in length. The contract for constructing the surface of this street was awarded to Thomas F. Minton May 20, 1910. Work was begun July 22, 1910, and completed August 19, 1910. It is a thirty (30) foot street, with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and artificial stone sidewalks five (5) feet in width, laid under a five (5) year maintenance guarantee. The flagging was furnished by the city and hauled by the contractor. All the other materials were hauled by the contractor. The surplus excavated material was hauled by the contractor to Morton street, between Harvard street and Blue Hill avenue.

*Prescott street*, from Frankfort street to the Boston, Revere Beach & Lynn Railroad, is about 1,218 feet in length. The contract for constructing the surface of this street was awarded to James Doherty November 3, 1909. Work was begun November 22, 1909, and suspended December 24, 1909. Work was resumed March 14, 1910, and completed May 16, 1910. It is a fifty (50) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and brick sidewalks eight (8) feet in width. All the materials were furnished by the contractor.

*Rosemont street*, from Gustine street to Train street, is about 433 feet in length. The contract for constructing the surface

of this street was awarded to William J. Rafferty May 20, 1910. Work was begun June 8, 1910, and completed July 27, 1910. It is a forty (40) foot street, with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and seven (7) foot artificial stone sidewalks. The flagging was furnished by the city and hauled by the contractor. All the other materials were furnished by the contractor. The artificial stone sidewalks were laid under a five (5) year maintenance guarantee.

*Ralston street*, from Dorchester avenue to Boston street, is about 224 feet in length. The contract for constructing the surface of this street was awarded to James Doherty September 8, 1910. Work was begun September 13, 1910, and suspended November 23, 1910. The work done this year consisted in placing filling and building a bulkhead and fence on the north-erly side of the street. A temporary plank walk was built for use during the winter. Work will be resumed early in the spring.

*Rochdale street*, from Cobden to Fenner streets, is about 190 feet in length. The surface of this street was constructed by the Street Department forces. It is a forty (40) foot street, with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and a seven (7) foot artificial stone sidewalk. The contract for constructing the artificial stone sidewalks was awarded to J. J. Sullivan November 14, 1910. Work was begun November 16, 1910, and completed November 21, 1910. These sidewalks were laid under a five (5) year maintenance guarantee.

*Rexford street*, from Blue Hill avenue to Oakland street, is about 1,013 feet in length. The contract for constructing the surface of this street was awarded to James H. Ferguson June 5, 1909. Work was begun June 9, 1909, and suspended November 13, 1909. It was resumed May 23, 1910, and completed June 14, 1910. The work done this year consisted in placing and seeding the loam spaces. It is a forty (40) foot street, with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and seven (7) foot sidewalks, consisting of a four and one-half ( $4\frac{1}{2}$ ) foot artificial walk and a seeded loam space. The contract for constructing the artificial stone sidewalks was awarded to Warren Brothers Company June 9, 1909. The cinder foundation was placed in the fall of 1909. Work was resumed April 8, 1910, and completed April 29, 1910. These sidewalks were laid under a five (5) year maintenance guarantee.

*Sudan street*, from Dorchester avenue to Sagamore street, is about 716 feet in length. The contract for constructing the surface of this street was awarded to J. C. Coleman & Sons Company April 8, 1910. Work was begun April 14, 1910, and completed May 21, 1910. It is a forty (40) foot street, with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and seven (7)

foot artificial stone sidewalks. The straight edgestone and flagging were furnished by the city and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. All the other materials were furnished by the contractor. The artificial stone sidewalks were laid under a five (5) year maintenance guarantee.

*Taft street*, from Dorchester avenue to Pleasant street, is about 643 feet in length. The contract for constructing the surface of this street was awarded to James Doherty July 7, 1910. Work was begun July 14, 1910, and completed August 9, 1910. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and seven (7) foot artificial stone sidewalks. The straight edgestone and flagging were furnished by the city and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. On a part of the street, artificial stone sidewalks had been built previous to construction. Such of these as were in good condition were allowed to remain. The new artificial stone walks were laid under a five (5) year maintenance guarantee.

*Welles avenue*, from Dorchester avenue to Argyle street, is about 723 feet in length. The contract for constructing the surface of this street was awarded to William J. Rafferty & Co., May 6, 1910. Work was begun May 16, 1910, and completed August 31, 1910. It is a sixty (60) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and ten (10) foot sidewalks, consisting of a six (6) foot artificial stone walk and a seeded loam space. The flagging was furnished by the city and hauled by the contractor. All the other materials were furnished by the contractor. The artificial stone sidewalks were laid under a five (5) year maintenance guarantee.

*Wentworth street*, from Norfolk street to Dunbar avenue, is about 858 feet in length. The contract for constructing the surface of this street was awarded to Joseph B. O'Rourke & Co. April 15, 1910. Work was begun April 29, 1910, and completed July 30, 1910. It is a forty (40) foot street, with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and seven (7) foot artificial stone sidewalks. The straight edgestone and flagging were furnished by the city and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. All the other materials were furnished by the contractor. The sidewalks were laid under a five (5) year maintenance guarantee.

*Whitman street*, from Norfolk street to Dunbar avenue, is about 808 feet in length. The contract for constructing the surface of this street was awarded to Joseph B. O'Rourke & Co. April 15, 1910. Work was begun May 2, 1910, and completed August 1, 1910. It is a fifty (50) foot street with a six

(6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and seven (7) foot artificial stone sidewalks. The straight edgestone and flagging were furnished by the city and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. All the other materials were furnished by the contractor. The artificial stone sidewalks were laid under a five (5) year maintenance guarantee.

*Beaumont street*, from Carruth street to Adams street, is about 1,706 feet in length. The construction of the surface of this street, with the exception of the artificial stone sidewalks, was done by the Street Department force. Work was completed July 27, 1910. It is a thirty-two (32) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and five and one-half ( $5\frac{1}{2}$ ) foot artificial stone sidewalks. The contract for constructing the artificial stone sidewalks was awarded to Adams-Pond Company September 8, 1910. Work was begun September 12, 1910, and completed September 26, 1910. The sidewalks were laid under a five (5) year maintenance guarantee.

#### GENERAL.

*Brent street*, from Washington street to Wainwright street, is about 1,130 feet in length. The contract for regulating the sidewalks and edgestones on this street, from Washington street to Talbot avenue, was awarded to C. W. Dolloff & Co. October 1, 1910, and extended to Wainwright street, October 24, 1910. Work was begun October 17, 1910, and completed November 17, 1910. The sidewalk bricks, paving blocks and edgestone were furnished by the city on the line of the work. All the other materials were furnished by the contractor.

*Corbet street*, from Norfolk street to Selden street, is about 1,155 feet in length. The contract for coñstructing the surface of this street was awarded to James H. McCarthy October 26, 1909. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and seven (7) foot crushed stone sidewalks. Work was begun March 28, 1910, and completed June 20, 1910. The paving blocks, straight edgestone and flagging were furnished by the city and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. All the other materials were furnished by the contractor.

*Glenway street*.—An artificial stone sidewalk was laid, under a five (5) year maintenance guarantee, on the westerly side of this street near Harvard street, by Jeremiah J. Sullivan. Work was begun November 11, 1910, and completed November 15, 1910.

*Harrison avenue, Waltham and Union Park streets*.—An artificial stone sidewalk was laid on these streets, bounding a triangular planting space, by Jeremiah J. Sullivan, under a five

(5) year maintenance guarantee. Work was begun November 7, 1910, and completed November 11, 1910.

*Morton street* was widened and graded from Harvard street to about 300 feet easterly. The contract for this work was awarded to the Commonwealth Construction Company April 21, 1910. Work was begun May 2, 1910, and completed May 16, 1910.

*Old Colony avenue*, from Dorchester street across Hyde street, is about 1,090 feet in length. The contract for constructing the surface of this street was awarded to James Doherty October 15, 1910. Work was begun October 24, 1910. This avenue is located, in part, on the old location of the Old Colony Railroad, being an extension of that part of the avenue which was built in 1908-09, and when completed will open up a thoroughfare from Dorchester avenue to the Strandway. The work this season has consisted in the placing of filling by the contractor.

*Rowena street*, from Carruth street to Bushnell street, is about 427 feet in length. The construction of the surface of this street, with the exception of the artificial stone sidewalks, was done by the department force. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) granite block gutters, flagging crosswalks, granite edgestone and artificial stone sidewalks, seven (7) feet in width. Work was begun August 2, 1910, and completed October 14, 1910. The contract for laying the artificial stone sidewalks was awarded to the Adams-Pond Company September 19, 1910. Work was begun September 21, 1910, and completed September 30, 1910. These sidewalks were laid under a five (5) year maintenance guarantee.

*Ruthven street and Elm Hill avenue*.—An artificial stone sidewalk was laid on these streets, at the Mt. Pleasant Home, by Jeremiah J. Sullivan, under a five (5) year maintenance guarantee. Work was begun October 26, 1910, and completed November 7, 1910.

*Saratoga street* (southerly side), from Moore street 200 feet easterly; *Moore street* (westerly side), between Saratoga street and Bennington street, and *Bennington street* (northerly side), from Moore street about 200 feet easterly, have a total length of about 550 feet. The contract for laying an artificial stone sidewalk on these streets was awarded to David M. Biggs & Co. November 17, 1910. These sidewalks were laid under a five (5) year maintenance guarantee and the contractor furnished all the materials. The necessary regulating of edge-stones and gutters was done by the department force.

*Welles avenue*, from Argyle street to Talbot avenue, is about 282 feet in length. The contract for constructing the surface of this street was awarded to William J. Rafferty & Co. July 16, 1910. It is a sixty (60) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and ten (10) foot sidewalks, consisting

of a six (6) foot artificial stone walk and a seeded loam space. The flagging was furnished by the city and hauled by the contractor. All the other materials were furnished by the contractor. The artificial stone sidewalks were laid under a five (5) year maintenance guarantee.

*Washington street*, westerly side, from Williams to Marvin streets, is about 1,050 feet in length. The contract for laying an artificial stone sidewalk was awarded to Jeremiah J. Sullivan September 2, 1910. Work was begun September 27, 1910, and completed October 11, 1910. The contractor also did the necessary regulating of edgestone and paving and furnished the materials. This sidewalk was laid under a five (5) year maintenance guarantee.

*Freeport street* (westerly side) at Commercial Point Bridge. A contract for filling, slope paving and building fence was awarded to James Doherty November 8, 1910. The work done consisted of depositing filling to form a slope and upon this slope granite slope paving was laid and a fence was built on the line of the street. This work was done to prevent the street from being washed away by the action of the tide. Work was begun November 14, 1910, and completed December 14, 1910.

#### Work Done by Contract, 1910.

	Old.	New.
Edgestones set.....	29,642 linear feet.	45,374 linear feet.
Concrete base laid.....	4,098.7 square yards.	64,091 square yards.
Granite block paving laid on a concrete base, with pitch and pebble joints.....	8,059 " "	19,086 " "
Granite flagging laid on a concrete base, with pitch and pebble joints.....	335 " "	759 " "
Granite block paving laid on a gravel base, with gravel joints.....	7,099 " "	17,630 " "
Granite flagging laid on a gravel base, with gravel joints .....	459 " "	1,154 " "
Granite block paving laid on a concrete base, with grout joints.....	.....	665 " "
Granite flagging laid on a concrete base, with grout joints.....	.....	83 " "
Wood block pavement laid on a concrete base.....	.....	3,233 " "
Asphalt surface laid.....	7,625 square yards.	.....
Asphalt base and surface laid.....	.....	479 " "
Asphalt patching.....	12,844	.....
Bituminous binder laid.....	163.6 cubic yards.	.....
Brick block pavement laid on a concrete base.....	.....	36,953 " "
Brick sidewalks laid.....	14,870 square yards.	4,277 " "
Crushed stone sidewalks laid.....	90 " "	11,309 " "
Artificial stone sidewalks laid.....	2,200 " "	50,151 " "
Earth excavation.....	28,280 cubic yards.	.....
Earth excavation.....	83,046 square yards.	.....
Rock excavation.....	477.8 cubic yards.	.....
Filling furnished.....	.....	21,014 cubic yards.
Macadam surface placed (trap rock).....	3,571 square yards.	56,215 square yards.
Loam furnished and laid.....	.....	970 cubic yards.
Loam furnished and laid.....	.....	6,704 square yards.
Covers reset.....	227	.....
Wooden fence built.....	.....	517 linear feet.
Artificial stone curbing laid.....	14 linear feet.	997 " "
Coal-tar concrete sidewalk laid.....	562 square yards.	611 square yards.
Slope paving.....	.....	416 " "

## AMOUNT OF WORK DONE BY PAVING SERVICE FORCES.

Macadam resurfaced . . . . .	480,110 square yards.
Macadam patched . . . . .	330,013 square yards.
Tarvia furnished and applied . . . . .	31,869 square yards.
Asphalt macadam binder furnished and applied . . . . .	2,605 square yards.
Asphalt road oil furnished and applied . . . . .	14,600 square yards.
Edgestones set . . . . .	16,175 linear feet.
Edgestones reset . . . . .	64,992 linear feet.
Granite block paving, gravel base and joints, laid . . . . .	2,059 square yards.
Granite block paving, gravel base and joints, relaid . . . . .	83,577 square yards.
Granite block paving, gravel base and grout joints, relaid . . . . .	1,572 square yards.
Gutter paving, gravel base and joints, laid . . . . .	6,807 square yards.
Gutter paving, gravel base and joints, relaid . . . . .	36,222 square yards.
Flagging crosswalks laid . . . . .	1,700 square yards.
Flagging crosswalks relaid . . . . .	13,321 square yards.
Brick sidewalks laid . . . . .	6,354 square yards.
Brick sidewalks relaid . . . . .	94,734 square yards.
Gravel and crushed stone sidewalks placed . . . . .	2,589 square yards.
Gravel and crushed stone sidewalks resurfaced . . . . .	147,312 square yards.
Roadways graded . . . . .	4,164 square yards.
Earth excavation . . . . .	2,362 cubic yards.
Filling . . . . .	1,926 cubic yards.
Wooden bulkhead repaired . . . . .	335 linear feet.
Brick block paving laid . . . . .	848 square yards.

## FINANCIAL STATEMENT, PAVING SERVICE.

Appropriation (amount set aside from \$1,500,000) . . . . .	\$1,275,000 00
Collected for work done and materials furnished different departments, individuals and companies . . . . .	21,218 65
Inspectors' services . . . . .	2,561 25
	<hr/>
	\$1,298,779 90
Expenditures from February 1, 1910, to January 31, 1911 . . . . .	1,261,128 72
	<hr/>
Unexpended balance, January 31, 1911 . . . . .	\$37,651 18

## OLD COLONY AVENUE, CONSTRUCTION OF.

Unexpended balance, February 1, 1910 . . . . .	\$10,943 55
Loan, July 19, 1910 . . . . .	28,000 00
	<hr/>
	\$38,943 55
Expenditures from February 1, 1910, to January 31, 1911 . . . . .	7,198 30
	<hr/>
Unexpended balance, January 31, 1911 . . . . .	<u>\$31,745 25</u>

## HIGHWAYS, MAKING OF.

Expenditures from February 1, 1910, to January 31, 1911 . . . . .	\$186,655 99
	<hr/>
HYDE PARK AVENUE, ASHLAND STREET TO HYDE PARK LINE, CHAPTER 437, ACTS OF 1908.	
Expenditures from February 1, 1910, to January 31, 1911 . . . . .	<u>\$24,006 63</u>

## FINANCIAL STATEMENT, MAINTENANCE APPROPRIATION.

Maintenance appropriation for 1910-11 . . . . .	\$1,500,000 00
Amount collected for work done and materials furnished different departments, companies and individuals, including inspectors' services, . . . . .	24,091 54
	<hr/>
	\$1,524,091 54
Less amount transferred to cen- tral office . . . . .	\$859 76
Less amount transferred to Ferry Division . . . . .	670 63
	<hr/>
	1,530 39
	<hr/>
	\$1,522,561 15
Expenditures from February 1, 1910, to Jan- uary 31, 1911 . . . . .	* 1,485,130 29
	<hr/>
Unexpended balance, January 31, 1911 . . . . .	<u>\$37,430 86</u>

\* Bridge service, \$224,001.57. Paving service, \$1,261,128.72.

## INCOME.

Statement showing the amount of bills deposited with the City Collector from February 1, 1910, to January 31, 1911, and credited to general revenue:

On account of edgestone and sidewalk assessments	\$17,804 09
Stone from ledges	8,137 60
Permits	14,036 26
Old junk, etc.	100 00
	<hr/>
	<u>\$40,077 95</u>

Amount paid into the City Treasury during the year:

On account of edgestone and sidewalk assessments	\$8,697 07
Stone from ledges	7,052 77
Permits	13,005 36
Old junk	103 24
	<hr/>
	<u>\$28,858 44</u>

Objects of Expenditures from the Maintenance Appropriation Classified by Districts, from  
February 1, 1910, to January 31, 1911.

Districts.	Macadam Repairs.	Block Repairs.	Snow.	Street Cleaning.	Edgestone and Sidewalk Repairs.	Crosswalk Repairs.	Street Work.	Schedule A, Miscellaneous.	Totals.
1. South Boston and Dorchester North,	\$1,505 89	\$4,758 75	\$8,896 05	\$7,601 82	\$10,155 87	\$786 95	\$23,485 89	.....	\$57,191 22
2. East Boston and Breed's Island.....	3,618 06	1,198 51	4,192 64	1,955 08	7,157 03	867 72	25,506 91	.....	44,495 95
3. Charlestown.....	2,814 96	4,121 49	5,781 34	2,328 98	4,601 37	682 84	21,496 94	.....	41,827 92
4. Brighton.....	4,779 50	.....	4,008 30	11,159 92	2,183 09	221 61	37,647 30	.....	59,999 72
5. West Roxbury.....	9,097 21	22 70	7,655 95	14,692 60	10,887 81	191 24	96,163 85	.....	138,711 36
6. Dorchester.....	8,373 65	486 12	4,087 09	11,410 54	8,327 13	866 41	62,804 31	.....	96,355 25
7. Roxbury South and Jamaica Plain....	8,774 72	3,007 96	11,475 84	25,236 10	9,532 79	1,880 25	119,862 90	.....	179,770 56
8. South End and Roxbury North.....	11,248 93	5,901 66	15,291 90	9,804 18	18,104 12	4,214 12	55,801 99	.....	120,366 90
9. Ashmont.....	3,908 47	460 01	2,817 87	9,407 87	3,756 58	315 41	25,694 99	.....	46,361 20
10. North and West Ends and Back Bay,	4,559 08	4,440 09	18,374 84	4,755 29	5,407 23	1,888 45	60,489 67	.....	99,914 65
									\$376,133 99
Totals.....	\$58,680 47	\$24,397 29	\$82,581 82	\$98,352 38	\$80,113 02	\$11,915 00	\$528,954 75	\$376,133 99	\$1,261,128 72

## SCHEDULE A.

Salary of deputy superintendent . . . . .	\$3,500 00
Salaries of office clerks . . . . .	11,487 83
Salary of chief engineer . . . . .	3,000 00
Salaries of assistant engineers . . . . .	6,062 13
Salaries of office clerks, engineer's office . . . . .	2,727 48
Salaries of permit office clerks . . . . .	6,488 06
Salaries of permit office inspectors . . . . .	15,405 20
Salaries of engineering inspectors . . . . .	651 53
Salaries of district inspectors . . . . .	10,194 92
Salary of constable . . . . .	1,357 84
Salary of medical inspector (entire department) . . . . .	1,500 00
Automobile expense, including chauffeur's wages, repairs, supplies, etc. . . . .	2,158 56
Automobile (net cost) . . . . .	850 00
Automobile, one-third of cost of superintendent's, . . . . .	660 27
Automobile insurance . . . . .	37 16
Premium on surety bonds . . . . .	25 00
Advertising (miscellaneous) . . . . .	150 73
Asphalt analysis . . . . .	15 00
Derricks, repairing, etc. . . . .	39 34
Dumping boat service . . . . .	110 25
Electrical appliances, labor and stock . . . . .	1,302 48
Furniture . . . . .	18 50
Fuel for heating buildings in yards . . . . .	1,076 35
Oil for street lighting . . . . .	606 90
Ice . . . . .	80 61
Electric lighting . . . . .	464 84
Gas lighting . . . . .	459 67
Newspapers, magazines, etc. . . . .	38 50
Oatmeal . . . . .	97 80
Printing . . . . .	3,255 39
Postage . . . . .	513 83
Stationery . . . . .	755 77
Adding machine . . . . .	270 00
Atlases . . . . .	219 00
Rent of towels . . . . .	133 60
Stoves, pipes, grates, etc. . . . .	162 35
Taxes . . . . .	417 27
Telephone service . . . . .	1,710 42
Traveling expenses . . . . .	597 50
Rent of land, etc. . . . .	6,432 17
Engineering supplies and incidentals . . . . .	568 85
Holidays, not including holidays charged on street accounts . . . . .	43,892 04
Pay allowed injured employees . . . . .	1,011 64
Soap for office . . . . .	3 75
<i>Carried forward</i> . . . . .	\$130,510 53

<i>Brought forward</i>	. . . . .	\$130,510 53
Signs, making, painting and putting up	. . . . .	10,532 02
Numbering streets	. . . . .	1,430 52
Snow scrapers (3)	. . . . .	450 00
Electric blowers (2)	. . . . .	56 00
Tools, hardware, etc., new, cost of repairing, etc.	. . . . .	18,580 06
Executions of courts and damages	. . . . .	5,224 78
Snow dumps, Dorchester avenue, Mt. Washington avenue and Charles River avenue	. . . . .	845 48
Carson street, building wooden steps	. . . . .	244 24
Artificial stone sidewalks	. . . . .	17,052 21
Advertising	. . . . .	\$3 80
Repairing	. . . . .	2,679 13
Rebates allowed	. . . . .	13,954 38
New walks laid	. . . . .	414 90
		<hr/>
Asphalt pavements repaired	. . . . .	21,868 52
Engineering	. . . . .	\$816 32
Inspection	. . . . .	1,118 00
Advertising	. . . . .	8 40
Amount paid to Boston Asphalt Company	. . . . .	84 95
Amount paid to Barber Asphalt Paving Company, on contract	. . . . .	19,516 05
Amount paid to Barber Asphalt Paving Company, outside of contract	. . . . .	304 80
Engineering expense	. . . . .	20 00
		<hr/>
Crossings, new	. . . . .	3,853 26
Fence repairs	. . . . .	3,791 94
Plank walk repairs	. . . . .	831 91
Plank walk, new on Parker Hill avenue	. . . . .	182 69
Edgestones, sidewalks and gutters new (not included elsewhere)	. . . . .	17,976 84
Sanding icy streets and sidewalks	. . . . .	1,399 57
Repairing offices, stable, sheds, etc., in yards	. . . . .	6,107 32
Horses purchased	. . . . .	4,265 00
Buggies, carts and wagons (new)	. . . . .	530 00
Expenses of stables, including driv- ers, feeders, fodder, horseshoeing, repairs to harnesses, carts, etc.,	\$110,237 16	
Amount earned by department teams	. . . . .	85,633 91
		<hr/>
Motor cycle, repairs, supplies, registration, etc.	. . . . .	24,603 25
Expenses of yards, including salaries of foremen, clerks, yardmen, tool wagon, etc.	. . . . .	87 19
		<hr/>
<i>Carried forward</i>	. . . . .	\$326,448 99

STREET DEPARTMENT — HIGHWAY DIVISION. 89

<i>Brought forward</i>	\$326,448 99
Sanitary Division: Care and feed of horses in East Boston stable and materials supplied, and work done	*7,135 78
Sewer Division: Care and feed of horses in East Boston stable and materials supplied, and work done	†1,592 07
Traverse street, subway repairs	37 90
Constable badge	1 25
Services of stenographer at hearing	10 00
Services of auctioneer, sale of land	201 00
Expert services	150 00
Scale repairs	253 06
Running brick tester	311 80
Sidewalk, cave-in, Boston street	17 50
Work done and materials furnished city departments and individuals	‡1,440 05
Wages of weighers at Chestnut Hill Crusher	1,379 54
Wages of weigher at Grove Street Crusher	582 34
Stock, materials	\$71,752 39
Stock, handling and teaming	41,634 10
	<hr/>
	\$113,386 49
Less stock delivered on streets	75,465 88
	<hr/>
	37,920 61
	<hr/>
	\$377,481 89
Amount earned by steam roller	\$23,764 00
Steam rollers, cost of operating, repairs, etc.	22,416 10
	<hr/>
	1,347 90
	<hr/>
	\$376,133 99

STREET WORK DONE IN PART BY CONTRACT AND DAY  
LABOR AND CHARGED TO THE MAINTENANCE  
APPROPRIATION.

*Albany street*, from Broadway to Dover street, and Broadway extension approach. Paved with large granite blocks on a 6-inch cement concrete base and regulated. Area, 5,288 square yards.

Amount paid to F. S. & A. D. Gore Corporation, under contract:

Engineering	\$25 00
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<i>Carried forward</i>	\$25 00
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\* Amount paid Highway Division during the year, \$7,420.88. † Amount paid Highway Division during the year, \$1,416.04. ‡ Amount paid into City Treasury, \$198.36.

<i>Brought forward</i>		\$25 00
5,547 square yards preparing site @ 35c.,	\$1,941 45	
2,179 linear feet, existing edgestone reset @ 11c.	239 69	
5,288 square yards concrete base laid @ 55c.	2,908 40	
254 square yards existing granite block paving, relaid, gravel joints, @ 35c.	88 90	
5,032 square yards granite block paving furnished and laid, pitch joints, @ \$2.53	12,730 96	
6 square yards existing flagging crosswalks relaid, gravel joints, @ 35c.	2 10	
234 square yards flagging crosswalks furnished and laid, pitch joints, @ \$4,	936 00	
21 square yards existing flagging crosswalks relaid, pitch joints, @ 85c.	17 85	
1,657 square yards existing brick sidewalks relaid @ 31c.	513 67	
	19,379 02	
Extra work—Furnish about 700 tons of crushed stone for the concrete base:		
676 tons crushed stone furnished @ \$1.50	1,014 00	
Extra work—Relay granite block paving on concrete base, with pitch and pebble joints, and do the necessary regulating on Broadway extension at the approach to Albany street:		
550 square yards preparing site @ 35c.,	\$192 50	
<i>Carried forward</i>	\$192 50	\$20,393 02
		\$25 00

## STREET DEPARTMENT — HIGHWAY DIVISION. 91

<i>Brought forward</i>	. . .	\$192 50	\$20,393 02	\$25 00
227 linear feet existing edgestone reset @ 11c. . . .		24 97		
336 square yards concrete base laid @ 55c., .		184 80		
24 square yards existing granite block pav- ing relaid, gravel joints, @ 35c.		8 40		
504 square yards existing granite block pav- ing relaid, pitch joints, @ 85c.		428 40		
9 square yards existing flagging crosswalks re-laid, gravel joints @ 35c. . . .		3 15		
14 square yards existing flagging crosswalks re-laid, pitch joints @ 85c. . . .		11 90		
212 square yards existing brick sidewalks re- laid @ 31c. . . .		65 72		
			919 84	
Extra work — Lay flagging on top of retaining wall between Oneida street and Broadway extension:				
6½ days, paver, @ \$5 . . .		\$30 63		
11½ days' labor, @ \$2 . . .		22 50		
			53 13	
Plus 15 per cent on \$53.13 . . .		7 97		
1 day double team @ \$5 . . .		5 00		
19½ bags Portland cement @ 38c. .		7 41		
Extra work—Reset covers to grade where directed:				
4 hours, mason, @ 70c. . .		\$2 80		
7 hours, tender, @ 25c. . .		1 75		
			4 55	
Plus 15 per cent on \$4.55 . . .		68		
			\$21,391 60	
Less 3,690 old granite blocks deliv- ered to contractor @ \$25 M. . .		92 25		
			\$21,299 35	
Less amount paid in 1909 . . .		18,115 21		
			\$3,184 14	
			\$3,209 14	

*Blackwood street*, wall, concrete wall built in place of timber bulkhead, length, 42 linear feet.

Inspection . . . . .	\$76 76
Advertising . . . . .	8 20
Blocks, 200 . . . . .	4 00
Amount paid to Commonwealth Construction Company, under contract,	1,200 00
	<u>\$1,288 96</u>

*Bowdoin avenue*, number 61 to 73 (Dorchester). Artificial stone sidewalks laid. Area, 715 square feet.

Engineering . . . . .	\$2 00
Inspection . . . . .	14 25
Engineering expense . . . . .	15
Advertising . . . . .	3 90
Amount paid to W. A. Murtfeldt Company, under contract:	
715 square feet artificial stone sidewalks furnished and laid	
@ .149c. . . . .	106 54
	<u>\$126 84</u>

*Brent street*, Washington street to Talbot avenue and extended to Wainwright street. Length, 1,130 linear feet. Area, 3,265 square yards. Edgestone reset, gutters repaved, brick sidewalks relaid and artificial stone sidewalks laid.

Engineering . . . . .	\$53 12
Inspection . . . . .	84 75
Labor, stonecutter . . . . .	3 00
Engineering expense . . . . .	2 40
Advertising . . . . .	4 10
Edgestone, 30 feet 4 inches . . . . .	21 23
Blocks, 1,275 . . . . .	25 50
Bricks, 5,800 . . . . .	69 60
Teaming . . . . .	13 55
Amount paid to C. W. Dolloff & Co., under contract:	
1,430 linear feet existing edgestone reset @ 10c. . . . .	\$143 00
482 square yards existing granite block paving relaid @ 30c.,	144 60
1,008 square yards existing brick sidewalks re-laid @ 25c. . . . .	252 00
	<u>539 60</u>
<i>Carried forward</i> . . . . .	\$816 85

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<i>Brought forward</i>		\$816 85
Extra work — Reset the edge-stones, repave the gutters and artificial stone sidewalks in Brent street, easterly side, from Talbot avenue to Wainwright street:		
289 linear feet existing edgestones reset @ 10c.		\$28 90
72 square yards existing granite block paving relaid @ 25c.	18 00	
1,558 square feet artificial stone sidewalks relaid @ 17c.	264 86	
	—	311 76
	—	<u>\$1,128 61</u>

*Charles street, Boylston street across Beacon street. Length, 1,427 linear feet. Area, 6,548 square yards. Large granite blocks laid on a concrete base with pitch and pebble joints, edgestone reset, crosswalks relaid and brick sidewalks relaid.*

Engineering	\$161 09
Inspection	473 25
Engineering expense	5 05
Advertising	3 70
Templets	6 07
Bricks, 29,500	383 50
Edgestone, 36 feet	25 20

Paid Coleman Brothers under contract:

6,527 square yards preparing site @ 40c.	\$2,610 80
2,414 linear feet existing edgestone reset @ 20c.	482 80
6,527 square yards concrete base furnished and laid @ 70c.	4,568 90
15 square yards existing granite block paving relaid, gravel joints, @ 60c.	9 00
6,314 square yards granite block paving furnished and laid, pitch joints, @ \$2.55	16,100 70

*Carried forward* . . . . . \$23,772 20 \$1,057 86

<i>Brought forward</i>	. . . . .	\$23,772 20	\$1,057 86
18 square yards existing flagging c r o s s - walks relaid, gravel joints, @ 50c.	. . . . .	9 00	
210 square yards flagging crosswalks f u r - nished and laid, pitch joints, @ \$4.10 . . . .		861 00	
4,518 square yards existing brick sidewalks re- laid, @ 30c. . . .		1,355 40	
		<u>                </u>	25,997 60

Extra work — Patch wood block  
pavement at Boylston street:

11 square yards wood block pavement patched @ \$3 . .	\$33 00
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Extra work — Reset  
granite curb at  
entrance to Public  
Garden:

1½ hours, edgestone set- ter @ 60c., \$0 90	
1½ hours' labor @ 25c. . . .	38
	—
	1 28

Plus 15 per cent on \$1.28 . . . .	19
	—

                 34 47

                 \$26,032 07

Credit: 223,445 old blocks @ \$20 M. . . . 4,468 90

                                  \$22,621 03

*Corbet street, Norfolk to Selden streets. Length, 1,155 linear feet. Area, 3,586 square yards. Six-inch macadam roadway constructed, edgestone set, gutter paved, crosswalk laid and crushed stone sidewalks built.*

Engineering . . . . .	\$139 10
Inspection . . . . .	252 00
Engineering expense . . . . .	3 05
Edgestone, 472 feet 9 inches circular, 1,673 feet 3 inches straight edge- stone and 2 small corners . . . . .	1,745 68
<i>Carried forward</i> . . . . .	\$2,139 83

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<i>Brought forward</i>	. . . . .	\$2,139 83
Flagging, 675 feet 6 inches	. . . . .	459 33
Blocks, 21,925	. . . . .	438 50
Paid to James H. McCarthy, under contract:		
2,105 cubic yards sub-grading (earth excavation) @ 65c.,	\$1,368 25	
30 cubic yards sub-grading (rock excavation) @ \$1.75,	52 50	
1,660 linear feet straight edgestone hauled and set @ 25c.	415 00	
492 linear feet circular edgestone set @ 20c.	98 40	
71 linear feet existing edgestone reset @ 15c.	10 65	
848 square yards granite block paving hauled and laid @ 75c.	636 00	
29 square yards existing granite block paving relaid @ 30c.	8 70	
142 square yards flagging crosswalks hauled and laid @ \$1	142 00	
2 square yards existing flagging crosswalks relaid @ 50c.	1 00	
2,915 square yards macadam surface furnished and placed @ 80c.	2,332 00	
1,570 square yards crushed stone sidewalks furnished and placed @ 60c.	942 00	
<i>Carried forward</i>	. . . . .	\$6,006 50 \$3,037 66

<i>Brought forward</i>	. . . . .	\$6,006 50	\$3,037 66
Extra work — Furnish stonecutter to trim flagging:			
32 hours, stonecutter @ 60c., \$19 20			
Plus 15 per cent on			
\$19.20 . . . . . 2 88	—	22 08	
	—	6,028 58	
	—		<u>\$9,066 24</u>

*Doane street, from Broad street about 130 feet westerly. Length 142 linear feet. Area, 243 square yards. Asphalt pavement resurfaced and crosswalks relaid.*

Engineering . . . . .	\$31 75
Inspection . . . . .	12 00
Labor, stonecutter . . . . .	6 00
Blocks, 75 . . . . .	1 50

*Paid The Barber Asphalt Paving Company, under contract:*

35 square yards existing granite block paving relaid, pitch joints, including preparing site, @ \$1.25 . . . . .	\$43 75
8 square yards existing flagging crosswalks relaid, pitch joints, including preparing site, @ \$1.25 . . . . .	10 00
224.3 square yards bituminous concrete binder and asphalt wearing surface furnished and laid, including preparing site, @ \$1.49 . . . . .	334 21
22.5 cubic yards extra cement concrete base furnished and laid @ \$6 . . . . .	135 00
<i>Carried forward</i> . . . . .	<u>\$522 96</u> <u>\$51 25</u>

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<i>Brought forward . . .</i>	\$522 96	\$51 25
Extra work — Break out and remove old concrete base where directed:		
77.3 square yards old con- crete base broken out and removed @ 75c. . . . .	57 98	
	—	580 94
	—	<u>\$632 19</u>

*Dorchester avenue, between Mt. Washington avenue and Dor-  
chester Avenue Bridge. Length, 917 linear feet. Area,  
2,931 square yards. Granite block roadway relaid on  
gravel base, edgestone reset, crosswalks relaid, brick side-  
walks relaid, and tar concrete sidewalks repaired.*

Engineering . . . . .	\$46 51
Inspection . . . . .	187 00
Advertising . . . . .	4 00
Engineering expense . . . . .	3 35
Bricks, 9,340 . . . . .	111 89
Paid to Simpson Brothers Corporation:	
16.7 square yards tar concrete side- walk . . . . .	25 00
Paid to Thomas Kiernan, under con- tract:	
837 linear feet existing straight edgestone reset @ 12c. . . . .	\$100 44
2,904 square yards exist- ing granite block paving relaid, gravel joints, @ 37c. . . . .	1,074 48
27 square yards exist- ing flagging cross- walks relaid, gravel joints, @ 55c. . . . .	14 85
1,089 square yards exist- ing brick side- walks relaid @ 30c. . . . .	326 70
	—
	1,516 47
	—
	<u>\$1,894 22</u>

*Dudley street, from Harrison avenue to Magazine street. Length,  
2,685 feet. Area, 11,000 square yards. Brick block pave-  
ment laid on a concrete base, edgestone reset and brick  
sidewalks relaid.*

Engineering . . . . .	\$549 15
Inspection . . . . .	442 00
Labor, stonecutter . . . . .	7 38
Advertising . . . . .	8 00
Teaming . . . . .	11 84
Engineering expense . . . . .	11 10
Edgestone, 130 feet 10 inches and 4 small corners . . . . .	105 98
Templets . . . . .	11 99
Bricks, 38,300 . . . . .	447 60
Gravel, 10 single loads . . . . .	8 00
Paid to James Doherty under con- tract:	
4,658 linear feet existing edgestone reset @ 11c. . . . .	\$512 38
137 square yards exist- ing granite block paving r e l a i d, gravel joints, @ 45c. . . . .	61 65
88 square yards granite block paving laid, including excavation, concrete base, gravel bed a n d grout joints, @ \$1.40 . . . . .	123 20
14 square yards exist- ing flagging cross- walks relaid, gravel joints, @ 50c. . . . .	7 00
36 square yards flagging crosswalks laid, in- cluding exca- vation, concrete base, gravel bed and grout joints, @ \$1.30 . . . . .	46 80
8,693 square yards brick block pavement furnished and laid, including ex- cavation, concrete base, sand, bed and grout joints, @ \$2.59 . . . . .	22,514 87
<i>Carried forward</i> . . . . .	\$23,265 90 \$1,603 04

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<i>Brought forward</i>	. . .	\$23,265 90	\$1,603 04
3,751 square yards existing brick sidewalks relaid @ 27c.	. .	1,012 77	
Extra work—Remove stumps where directed:			
6 hours' labor @ 25c. . .	\$1 50		
Plus 15 per cent on \$1.50 . . .	22		
2 hours double team @ 75c. . .	1 50		
		3 22	
Extra work—Puddle and ram trenches where directed:			
43 hours' labor @ 25c. . .	\$10 75		
Plus 15 per cent on \$10.75 . . .	1 61		
		12 36	
Extra work—Remove existing edge stone for driveways where directed:			
10 hours' labor @ 25c. . .	\$2 50		
Plus 15 per cent on \$2.50 . . .	38		
		2 88	
Extra work — Patch artificial stone sidewalks where directed:			
5 hours, stone-cutter, @ 62½c. . .	\$3 13		
15½ hours' labor @ 25c. . .	3 88		
		7 01	
Plus 15 per cent on \$7.01 . . .	1 05		
<i>Carried forward</i>	. . .	\$24,305 19	\$1,603 04

<i>Brought forward</i>	\$24,305 19	\$1,603 04
1 barrel Portland cement @ \$1.60 .	1 60	
Extra work — Grade the approach at Dunmore street:		
3 hours' labor @ 25c. . \$0 75		
Plus 15 per cent on 75c. . . 11		
	86	
Extra work — Haul old granite paving blocks to the Di- mock street lot in- stead of to the Massachusetts avenue lot:		
2,233 tons old granite pav- ing blocks hauled more than one-half mile, and not more than one mile, one overhaul mile per half mile per ton (Section 1, Article E) @ 11c. . .	491 26	
	<u>24,798 91</u>	
	<u>\$26,401 95</u>	
Credit: 270,810 old blocks @ \$20 M.,	5,416 20	
	<u>\$20,985 75</u>	

*Elm Hill avenue, from Ruthven to Homestead street. Length, 500 linear feet. Area, 1,340 square yards. Macadam roadway resurfaced, 3 inches deep, edgestone set, gutters laid and crosswalks laid. Work done by division force, with exception of artificial stone sidewalks.*

Engineering . . . . .	\$4 36
Inspection . . . . .	36 75
Engineering expense . . . . .	60
Labor, edgestone excavation . . . . .	365 63
Labor, edgestone resetting . . . . .	67 63
Labor, gutter excavation . . . . .	84 57
Labor, gutter relaying . . . . .	72 74
Labor, crosswalk excavation . . . . .	2 25
Labor, crosswalk relaying . . . . .	21 68
<i>Carried forward</i> . . . . .	<u>\$656 21</u>

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<i>Brought forward</i>	.	.	\$656 21
Labor, macadam excavating	.	.	57 50
Labor, macadam spreading	.	.	138 50
Advertising	.	.	3 70
Teaming	.	.	165 40
Water cart	.	.	29 40
Steam roller	.	.	97 50
Edgestone, 423 feet 5 inches	.	.	303 89
Crushed stone, 207.65 tons	.	.	253 34
Gravel, 35 double loads	.	.	56 00
Paid to Jeremiah J. Sullivan, under contract:			
4,679 square feet artificial stone sidewalks furnished and laid @ 17½c.	.	.	\$837 54
Extra work — Remove tree where directed:			
4 hours' labor @ 25c.	.	\$1 00	
Plus 15 per cent on \$1	.	15	
	—	1 15	
	—	838 69	
	<u>—</u>	<u>\$2,600 13</u>	

*Faneuil Hall square*, granite block paving relaid on existing concrete base, which was patched where necessary.

Engineering	.	.	\$3 75
Paid to Central Construction Company:			
38 square yards granite block paving relaid, pitch and pebble joints, including concrete base, @ \$3.25,	\$123 50		
299 square yards granite block paving re-laid, pitch and pebble joints, @ \$2.25	672 75		
	—	796 25	
	<u>—</u>	<u>\$800 00</u>	

*Florence street*, retaining wall built at Mt. Hope Station. Work done in 1909, finished by department force. Iron fence erected and painted.

Engineering	.	.	\$1 00
Inspection	.	.	22 50
<i>Carried forward</i>	.	.	\$23 50

<i>Brought forward</i>		\$23 50
Paid to Daniel E. Lynch, under contract:		
Building wall . . . . .	\$2,200 00	
Extra work — Extend wall to bridge wall on Blakemore street, about 50 feet in length, and furnish filling and grade in front of new wall on Florence street:		
7½ days, mason, @ \$4.50 . . . . .	\$33 75	
6 days, tender, @ \$2.50 . . . . .	15 00	
26 days' labor @ \$2 . . . . .	52 00	
	100 75	
Plus 15 per cent on \$100.75, . . . . .	15 11	
		\$2,315 86
Less amount paid in 1909, . . . . .	1,716 73	
		599 13
Paid to P. J. Dinn & Co., under contract:		
352 linear feet iron fence built, erected and painted . . . . .	633 60	
		\$1,256 23

*Forbes street*, from Centre street to Chestnut avenue. Length, 1,413 linear feet. Area, 2,680 square yards. Edgestone set, gutters paved, macadam roadway resurfaced 3.2 inches deep and sidewalks graded and covered with dust. Work done in part by the city and in part by Anthony Diamond.

Engineering . . . . .	\$15 75
Labor, macadam excavation . . . . .	34 00
Labor, macadam spreading . . . . .	229 25
Labor, gravel walks . . . . .	124 00
Labor, street cleaning . . . . .	18 00
Steam roller . . . . .	130 00
Water cart . . . . .	41 65
Teaming . . . . .	96 22
Advertising . . . . .	4 00
Edgestone, 1,558 feet 5 inches, straight; 14 feet 7 inches circular . . . . .	1,108 44
Blocks, 15,865 . . . . .	317 30
<i>Carried forward</i> . . . . .	\$2,118 61

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<i>Brought forward . . . . .</i>	\$2,118 61
Crushed stone, 537.77 tons . . . . .	656 67
Flagging, 40 feet 4 inches . . . . .	27 42
Paid to Anthony Diamond, under contract:	
1,560.7 linear feet straight edgestone hauled and set @ 22c. . . . .	\$343 35
14.7 linear feet circular edgestone set @ 16c. . . . .	2 35
321.7 linear feet existing edgestone reset @ 16c. . . . .	51 47
537.4 square yards granite block paving hauled and laid @ 54c. . . . .	290 20
122.4 square yards existing granite block paving relaid @ 45c. . . . .	55 08
	<hr/>
	\$742 45
Extra work—Excavate and remove rock where directed:	
5½ cubic yards rock excavation @ \$1.75 . . . . .	9 33
Extra work—Relay existing brick sidewalk where directed:	
1½ square yards existing brick sidewalk relaid @ 35c. . . . .	53
	<hr/>
	752 31
	<hr/>
Credit: 1 large corner . . . . .	\$3,555 01
	<hr/>
	7 00
	<hr/>
	<u>\$3,548 01</u>

*Freeport street, retaining wall built at Commercial Point Bridge, westerly side. Length, 151 linear feet.*

Engineering . . . . .	\$50 88
Inspection . . . . .	74 25
Engineering expense . . . . .	1 75
Advertising . . . . .	6 80
	<hr/>
<i>Carried forward . . . . .</i>	\$133 68

<i>Brought forward</i>		\$133 68
Paid to James Doherty, under contract:		
250 cubic yards filling furnished and placed @ \$1	\$250 00	
416.44 square yards slope paving furnished and placed @ \$3,	1,249 32	
125 linear feet fence furnished and built @ 49c.	61 25	
	1,560 57	<u>\$1,694 25</u>

*Glenway street, westerly side, near Harvard street. Length, 189 linear feet. Area, 1,409 square feet artificial stone sidewalks laid.*

Engineering	\$5 00
Inspection	14 25
Engineering expense	30
Advertising	3 60

Paid to Jeremiah J. Sullivan, under contract:

1,409 square feet artificial stone side walks laid @ 18c.	\$253 62
174 linear feet edgestone reset @ 15c.	26 10
58 square yards granite block paving relaid @ 35c.	20 30
	300 02
	<u>\$323 17</u>

*Hancock street, Columbia road to Winter street (Dorchester). Brick block paving on a concrete base and regulating, work unfinished.*

Engineering	\$215 89
Inspection	456 50
Engineering expense	4 00
Steam roller	62 50
Edgestone, 27 feet 7 inches circular, 9 feet 2 inches straight	39 52
Crushed stone, 6 tons	7 32

Paid to Central Construction Company, under contract:

1,752 linear feet existing edgestone reset @ 11c.	\$192 72
	\$192 72

*Carried forward*      \$785 73

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<i>Brought forward . . .</i>	\$192 72	\$785 73
19 square yards granite block paving laid, grout joints, in- cluding excavation concrete base and gravel bed, @ \$1.50 . . .	28 50	
5,060 square yards brick block pavement furnished and laid, including excavation, concrete base, sand bed and grout joints, @ \$2.57 . . .	13,004 20	
2,850 square yards brick block pavement furnished and laid (unfinished) @ \$1.25 . . .	3,562 50	
	<hr/>	
	\$16,787 92	
Less 2½ days use of city steam roller @ \$12 . . .	30 00	
	<hr/>	
	\$16,757 92	
Less 5 per cent re- tained . . .	837 90	
	<hr/>	
	15,920 02	
	<hr/>	
Credit: 11,905 old blocks @ \$20 M. .	238 10	\$16,705 75
	<hr/>	
		\$16,467 65

*Harrison avenue, Union Park and Waltham streets; around triangular planting space. Area, 2,364 square feet.  
Artificial stone sidewalks laid.*

Engineering . . . . .	\$8 14
Inspection . . . . .	16 50
Engineering expense . . . . .	25
Advertising . . . . .	3 70
Paid to Jeremiah J. Sullivan, under contract:	
2,364 square feet artificial stone side- walks furnished and laid @ 18c.,	425 52
	<hr/>
	\$454 11

*Harvard street, Washington street to Harrison avenue  
Length, 414 linear feet. Area, 966 square yards. Paved  
with wood blocks on a concrete base and regulated.*

Engineering . . . . .	\$32 27
Inspection . . . . .	143 25
Engineering expense . . . . .	2 15
Advertising . . . . .	3 90
Templets . . . . .	4 43
Blocks, 275 . . . . .	8 63
Bricks, 1,500 . . . . .	18 00
Paid to James H. McCarthy, under contract:	
944 square yards prepar- ing site @ 15c. . . . .	\$141 60
210 linear feet existing edgestone reset @ 15c. . . . .	31 50
914 square yards con- crete base fur- nished and laid @ 78c. . . . .	712 92
22 square yards existing granite block pav- ing relaid, gravel joints, includ i n g preparing site, @ 50c. . . . .	11 00
36 square yards existing granite block pav- ing relaid, p i t c h joints, @ \$1 . . . . .	36 00
1 square yard existing flagging cross- walks relaid, gravel joints, in- cluding preparing site, @ 50c. . . . .	50
908 square yards wood block p a v e m e n t furnished and laid @ \$2.67 . . . . .	2,424 36
123 square yards existing brick side w a l k s relaid @ 25c. . . . .	30 75
	<hr/>
	\$3,388 63
Extra work. — Haul old granite blocks as directed to Forbes street:	
127 tons old granite blocks hauled to Forbes	<hr/>
<i>Carried forward</i> . . . . .	\$3,388 63
	<hr/>
	\$212 63

STREET DEPARTMENT — HIGHWAY DIVISION. 107

<i>Brought forward</i>	\$3,388 63	\$212 63	
street, two and one-half miles overhaul, per half mile, per ton @ 11c.	69 85		
		3,671 11	
Credit: 8,580 old granite blocks @ \$20 M.		171 60	
			<u>\$3,499 51</u>

*Harvard street* (Dorchester), from Washington street to Blue Hill avenue. Area, 24,784 square feet. Artificial stone sidewalks built, edgestone reset and gutters repaved.

Inspection		\$141 00	
Inspection expense		20	
Advertising		3 90	
Drain repair (Sewer Division)		10 97	
Flagging, 18 feet 1 inch		12 30	
Paid to W. A. Murtfeldt Company, under contract:			
24,784 square feet artificial stone sidewalks laid @ 14.9c.	\$3,692 82		
3,403 linear feet edge- stone reset @ 10c.	340 30		
1,105 square yards gran- ite block paving relaid @ 33c.	364 65		
		4,397 77	
			<u>\$4,566 14</u>

*Heath street*, from Parker street to South Huntington avenue. Length, 3,079 linear feet. Area, 12,718 square yards. Brick block paving on concrete base and regulating.

Engineering		\$534 28	
Inspection		381 00	
Engineering expense		11 50	
Advertising		3 80	
Templets		11 57	
Edgestone, 15 feet 4 inches, circular,		18 40	
Bricks, 6,000		72 00	
Blocks, 10,207		612 42	
Paid to Field, Barker & Underwood, Inc., under contract:			
1,025 linear feet straight edgestone fur- nished and set @ 95c.	\$973 75		
<i>Carried forward</i>	\$973 75	\$1,644 97	

<i>Brought forward</i>	. . .	\$973 75	\$1,644 97
84 linear feet circular edgestone fur- nished and set @ 15c. . . .		12 60	
3,945 linear feet existing edgestone reset @ 10c. . . .		394 50	
14 square yards exist- ing granite block paving relaid, gravel joints, @ 50c. . . .		7 00	
346 square yards gran- ite block paving laid, grout joints, including excava- tion, concrete base and gravel bed, @ \$1.90 .		657 40	
18 square yards flag- ging crosswalks laid, grout joints, including excavation, concrete base and gravel bed, @ \$1.80 .		32 40	
13,259 square yards brick block pavement furnished and laid, including excavation, con- crete base, sand bed and grout joints, @ \$2.53 .		33,545 27	
7 square yards brick sidewalks laid @ 25c. . . .		1 75	
667 square yards exist- ing brick side- walks relaid @ 25c. . . .		166 75	
			\$35,791 42
Extra work—Ex- cavate and re- move rock where directed in edge- stone trench:			
<i>Carried forward</i>	. . .	\$35,791 42	\$1,644 97

STREET DEPARTMENT — HIGHWAY DIVISION. 109

<i>Brought forward</i>		\$35,791 42	\$1,644 97
48 cubic yards rock ex- cavation @ \$1.75,		84 00	
Extra work—Haul new granite blocks from South End paving yard:			
42 loads paving blocks hauled @ \$2		84 00	
Extra work—Cut concrete conduit as directed:			
15 hours' labor @ 25c. . . \$3 75			
Plus 15 per cent on \$3.75 . . . 56			
	_____	4 31	
Extra work—Fur- nish and place concrete in Water D e p a r t m e n t openings:			
32 hours' labor @ 25c.,		8 00	
Plus 15 per cent on \$8 . . . . .		1 20	
3 barrels cement @ \$1.80 . . \$5 40			
1½ cubic yards sand @ \$1.25 . . . 1 88			
3 cubic yards crushed stone @ \$1.50 . . . 4 50			
	_____	11 78	
Extra work—Reset manhole cover:			
1 cover reset @ \$3 . . . 3 00			
	_____	35,987 71	
Credit: 1,400 old blocks @ \$20 M.		\$37,632 68	
		28 00	
	_____	\$37,604 68	

*Kingston street, from Beach to Essex streets. Length, 492 linear feet. Area, 1,861 square yards. Asphalt pavement re-surfaced, edgestone reset and brick sidewalks relaid.*

Engineering	. . . . .	\$64 76
Inspection	. . . . .	51 00

<i>Carried forward</i>	. . . . .	\$115 76
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<i>Brought forward . . . . .</i>	\$115 76
Engineering expenses . . . . .	95
Advertising . . . . .	3 80
Teaming . . . . .	3 17
Paid to Barber Asphalt Paving Company, under contract:	
59 linear feet existing edgestone r e s e t @ 20c. . . . .	\$11 80
17 square yards existing granite block paving r e l a i d , gravel joints, @ 35c. . . . .	5 95
5 square yards granite block paving laid, pitch joints, including preparing site and concrete base, @ 85c. . . . .	4 25
23 square yards existing granite block paving r e l a i d , pitch joints, @ 85c. . . . .	19 55
16 square yards flagging crosswalks laid, pitch joints, including preparing site and concrete base, @ 95c., . . . . .	15 20
17 square yards existing flagging crosswalks r e l a i d , pitch joints, including preparing site, @ 95c. . . . .	16 15
1,861 square yards bituminous concrete binder a n d a s - phalt w e a r i n g surface furnished and laid, including preparing site, @ \$1.56 . . . . .	2,903 16
6 cubic yards extra bituminous binder	
<i>Carried forward . . . . .</i>	\$2,976 06
	\$123 68

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<i>Brought forward</i>	. . . . .	\$2,976 06	\$123 68
furnished and laid @ \$9.94	. . . . .	59 64	
60 cubic yards extra cement concrete base furnished and laid @ \$7.40	. . . . .	444 00	
55 square yards exist- ing brick side- walks relaid, in- cluding preparing site, @ 30c.	. . . . .	16 50	
	. . . . .	3,496 20	
Credit: 6 linear feet flagging @ 68c.	. . . . .	\$3,619 88	
	. . . . .	4 08	
			<u>\$3,615 80</u>

*Longwood avenue, Brookline avenue to Huntington avenue.  
Length, 2,138 linear feet. Area, 5,982 square yards.  
Brick block paving on concrete base and regulating.*

Engineering	. . . . .	\$199 49	
Inspection	. . . . .	209 88	
Engineering expense	. . . . .	10 25	
Advertising	. . . . .	3 80	
Teaming	. . . . .	7 36	
Templets	. . . . .	6 75	
Edgestone, 105 feet 1 inch straight and 112 feet $9\frac{1}{2}$ inches circular	. . . . .	208 90	
Bricks, 8,500	. . . . .	110 50	
Blocks, 2,500	. . . . .	150 00	
Paid to Field, Barker & Underwood, Inc., under contract:			
103 linear feet straight edgestone hauled and set @ 18c.	. . . . .	\$18 54	
104 linear feet circular edgestone set @ 15c.	. . . . .	15 60	
2,989 linear feet existing edgestone reset @ 10c.	. . . . .	298 90	
59 square yards exist- ing g r a n i t e block paving re- laid, gravel joints, @ 50c.	. . . . .	29 50	
<i>Carried forward</i>	. . . . .	\$362 54	\$906 93

<i>Brought forward</i>	. . . . .	\$362 54	\$906 93
105 square yards granite block paving, hauled and laid, grout joints, @ \$1.90 . . . .		199 50	
26 square yards granite block paving laid, grout joints, @ \$1.90 . . . .		49 40	
29 square yards flag- ging crosswalks laid, grout joints, @ \$1.80 . . . .		52 20	
5,764 square yards brick block pavement furnished and laid, including excavation, concrete base, sand bed and grout joints, @ \$2.59 . . . .		14,928 76	
1,153 square yards existing brick sidewalks relaid @ 25c. . . . .		288 25	
Extra work: Remove stumps where directed:	. . . . .		
45 hours' labor @ 25c., Plus 15 per cent on \$11.25 . . . .		11 25	
		1 69	
		— 15,893 59	
		— \$16,800 52	
Credit: 13,370 old blocks @ \$20 M. . . . .		207 40	
		— \$16,533 12	

*Massachusetts avenue* (southerly roadway), Columbus avenue to Washington street. Length, 1,843 linear feet. Area, 5,664 square yards. Asphalt pavement resurfaced, edge-stone reset, crosswalks relaid and sidewalks relaid.

Engineering . . . . .	\$158 65
Inspection . . . . .	99 00
Labor, stonemason . . . . .	30 00
Engineering expense . . . . .	3 85
Advertising . . . . .	3 80
<i>Carried forward</i> . . . . .	\$295 30

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<i>Brought forward</i>	. . . . .	\$295 30
Blocks, 750	. . . . .	15 00
Bricks, 5,300	. . . . .	63 60
Paid Warren Brothers Company, under contract:		
810 linear feet existing edgestone r e s e t @ 20c. . . . .		\$162 00
151 square yards con- crete base fur- nished and laid, including prepar- ing site, @ \$1 . . .		151 00
48 square yards existing granite block pav- ing relaid, gravel j o i n t s , including preparing site, @ 35c. . . . .		16 80
44 square yards exist- ing granite block paving r e l a i d , pitch joints, in- cluding preparing site, @ 85c. . . .		37 40
4 square yards existing flagging crosswalks relaid, g r a v e l j o i n t s , including preparing site, @ 50c. . . . .		2 00
113 square yards existing flagging crosswalks r e l a i d , p i t c h j o i n t s , including preparing site, @ 75c. . . . .		84 75
5,538 square yards bitu- minous concrete binder and asphalt wearing s u r f a c e furnished and laid, including prepar- ing site, @ \$1.39 .		7,697 82
104.6 cubic yards extra bi- tuminous binder furnished and laid @ \$9.95 . . . .		1,040 77
<i>Carried forward</i>	. . . . .	\$9,192 54      \$373 90

<i>Brought forward</i>	. . .	\$9,192 54	\$373 90
37.5 cubic yards, extra cement concrete, base, furnished and laid, @ \$7	. . .	262 50	
680 square yards existing brick sidewalks re-laid, including preparing site, @ 30c., . . .		204 00	
		<hr/>	
			9,659 04
Extra work—Remove the existing concrete base where directed and replace with new concrete:			
276 square yards existing concrete base removed and replaced with new concrete @ \$1.50		414 00	
		<hr/>	
			<u>\$10,446 94</u>

*Meridian street, Maverick square to Central square. New blocks furnished for the track brow and laid by the Boston Elevated Railway Company.*

Labor	. . .	\$74 75	
Teaming	. . .	201 52	
Blocks, 28,412	. . .	1,903 60	
		<hr/>	
Credit: 30,249 old blocks @ \$20 M		\$2,179 87	
		604 98	
		<hr/>	
			<u>\$1,574 89</u>

*Milk street, from Pearl to Oliver streets, extended to Battery-march street and including approaches. Length, 311 linear feet. Area, 1,264 square yards. Paved with wood blocks on concrete base and regulated.*

Engineering	. . .	\$71 28	
Inspection	. . .	80 00	
Advertising	. . .	2 05	
Paid James Doherty, under contract:			
1,223 square yards preparing site @ 33c.,		\$403 59	
210 cubic yards concrete base furnished and laid @ \$4.53		951 30	
11 square yards existing granite block pavement relaid,			
<i>Carried forward</i>	. . .	\$1,354 89	\$153 33

<i>Brought forward</i>	. . . . .	\$1,354 89	\$153 33
pitch joints, including preparing site, @ 99c.	. . . . .	10 89	
30 square yards existing flagging cross-walks relaid, pitch joints, including preparing site, @ \$1.05	. . . . .	31 50	
1,223 square yards wood block pavement furnished and laid @ \$2.70	. . . . .	3,302 10	
			4,699 38
Extra work — Relay existing granite block paving and flagging on Milk street, between Oliver street and Batterymarch street, and where directed in Post Office square:			
962 square yards existing granite block paving relaid, including preparing site, @ 99c.	. . . . .		952 38
Extra work—Haul old granite blocks to Massachusetts avenue lot instead of to yard No. 2, Albany street:			
408.75 tons old granite blocks hauled to Massachusetts avenue lot, one mile overhaul, per half mile, per ton @ 11c.	. . . . .	89 92	
			\$5,895 01
Credit: 24,755 old granite blocks @ \$20 M.	. . . . .	491 50	
			<u>\$5,403 51</u>

Paid by estate of E. S. Converse, \$4,699.38.

*Morton street*, from Blue Hill avenue to Harvard street. Length, 1,407 linear feet. Area, 8,096 square yards. Excavated and graded.

Engineering	. . . . .	\$22 36	
Engineering expense	. . . . .	60	
Advertising	. . . . .	3 80	
<i>Carried forward</i>	. . . . .	\$26 76	

Brought forward . . . . .	\$26 76
Paid to Commonwealth Construction Company, under contract:	
796 cubic yards earth ex- cavated and gra- ded @ 80c. . . . .	\$636 80
Extra work — Re- m o v e s t u m p s where directed:	
4 days, fore- man, @ \$5, \$20 00	
53 days' labor @ \$2 . . . 106 00	126 00
Plus 15 per cent on \$126 . . . . .	18 90
4 days, double team, @ \$6 . . . . .	24 00
Extra work — Ex- cavate and re- move rock where directed:	
116 cubic yards rock ex- cavated and re- moved @ \$1.75 . . .	203 00
	1,008 70
	—————
	\$1,035 40

*North Market street, from Merchants row to Commercial street.*

Length, 645 linear feet. Area, 3,075 square yards. Roadway repaved with new granite blocks on a concrete base, edgestone reset, crosswalks relaid and brick sidewalks relaid.

Engineering	.	.	.	.	.	\$84	39	
Inspection	.	.	.	.	.	347	63	
Engineering expense	.	.	.	.	.	1	30	
Advertising	.	.	.	.	.	3	90	
Templets	.	.	.	.	.	4	31	
Teaming	.	.	.	.	.	9	12	
Edgestones, 155 feet 4 inches	.	.	.	.	.	108	73	
Bricks, 700	.	.	.	.	.	8	23	
Paid C. W. Dolloff & Co., under contract:								
2,841 square yards preparing site @ 46c.	.	.	\$1,306	86				
236 linear feet existing edystone reset @ 15c.	.	.	.	.	35	40		
<i>Carried forward</i>	.	.	\$1,342	26			\$567	61

<i>Brought forward</i>	. . .	\$1,342 26	\$567 61
2,841 square yards concrete base furnished and laid @ 76c.	. . .	2,159 16	
2,758 square yards granite block paving furnished and laid, pitch joints, @ \$2.54	. . .	7,005 32	
214 square yards existing granite block paving relaid, pitch joints, @ 95c.	. . .	203 30	
64.4 square yards flagging crosswalks furnished and laid, pitch joints, @ \$3.95	. . .	254 38	
39 square yards existing flagging crosswalks relaid, pitch joints, @ 75c.	. . .	29 25	
27 square yards existing brick sidewalks re-laid @ 25c.	. . .	6 75	
		—	11,000 42
Extra work — Bar and ram sewer trench:			
2 days' labor @ \$2	. . .	\$4 00	
Plus 15 per cent on			
\$4	. . .	60	
		—	4 60
Extra work — Relocate cross-walk as directed:			
4 hours, paver, @ $62\frac{1}{2}$ c.,		\$2 50	
12 hours, helper, @ 25c.,		3 00	
4 hours, stone cutter,			
@ 60c.	. . .	2 40	
		—	7 90
Plus 15 per cent on \$7.90	. . .	1 19	
Extra work — Clean and haul old blocks for repaving on Commercial street at approach to North Market street:			
4 days' labor @ \$2	. . .	\$8 00	
Plus 15 per cent on			
\$8	. . .	1 20	
		—	9 20
<i>Carried forward</i>	. . .	\$11,590 92	

<i>Brought forward</i>	. . . . .	\$11,590 92
5 hours, double team, @ 68 $\frac{3}{4}$ c.	. . . . .	\$3 44
	<u>3 44</u>	
		\$11,594 36
Credit: 57,630 old blocks @ \$20 M.	. . . . .	1,152 60
		<u>\$10,441 76</u>

*Oliver street*, from Milk street to 200 feet southeasterly. Length, 200 linear feet. Area, 766 square yards. Paved with wood blocks on a concrete base and regulated.

Engineering	. . . . .	\$39 91
Inspection	. . . . .	28 00

Paid James Doherty, under contract:

594 square yards preparing site @ 33c.	. . . . .	\$196 02
100 cubic yards concrete base furnished and laid @ \$4.53	. . . . .	453 00
158 square yards existing granite block paving relaid, pitch joints, including preparing site, @ 99c.	. . . . .	156 42
15 square yards existing flagging crosswalks relaid, pitch joints, including preparing site, @ \$1.05	. . . . .	15 75
594 square yards wood block pavement furnished and laid @ \$2.70	. . . . .	1,603 80
		<u>2,424 99</u>

Credit: 15,228 old granite blocks @ \$20 M.	. . . . .	\$2,492 90
		<u>304 56</u>
		<u>\$2,188 34</u>

Paid by American Telegraph and Telephone Company, \$2,424 99.

*Otisfield street* (Roxbury), sidewalks patched with tar concrete where trees were removed. Area, 221 square yards.

Amount paid Simpson Brothers Corporation (work done in 1909)	. . . . .	\$259 00
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*Parkman street*, from North Russell to Blossom streets. Length, 239 linear feet. Area, 491 square yards. Asphalt pave-

ment laid on concrete base, edgestone reset, crosswalk and brick sidewalks relaid.

Engineering . . . . .	\$25	75	
Inspection . . . . .	52	50	
Engineering expense . . . . .		25	
Advertising . . . . .	3	90	
Teaming . . . . .	3	09	
Flagging, 44 feet 2 inches . . . . .	30	03	
Edgestone, 6 feet 2 inches . . . . .	4	32	
Blocks, 75 . . . . .	3	38	
Bricks, 5,177 . . . . .	62	12	
Paid Warren Brothers Company, under contract:			
405 linear feet existing edgestone reset @ 25c. . . . .	\$101	25	
22 square yards existing granite block paving relaid, gravel joints, @ 35c. . . . .	7	70	
9.5 square yards granite block paving laid, pitch joints, including preparing site and concrete base, @ \$1 . . . . .	9	50	
8.6 square yards flagging crosswalks laid, pitch joints, including preparing site and concrete base, @ \$1.70 . . . . .	14	62	
479 square yards concrete base, bituminous concrete binder and asphalt wearing surface, furnished and laid, including preparing site, @ \$2.62 . . . . .	1,254	98	
2 square yards bituminous concrete binder and asphalt wearing surface furnished and laid, including preparing site, @ 30c. . . . .	60		
<i>Carried forward</i> . . . . .	\$1,388	65	
		\$185	34

<i>Brought forward</i>	. . .	\$1,388 65	\$185 34
231 square yards existing brick sidewalks re- laid @ 25c. . .	57 75		
		—	1,446 40
		—	\$1,631 74
Credit: 428 old blocks @ \$20 M. . .	9 56	—	\$1,622 18

*Pearl street, from Milk street to 148 feet north. Length, 153 linear feet. Area, 508 square yards. Paved with wood blocks on concrete base and regulated.*

Engineering . . . . .	\$26 79
Inspection . . . . .	32 00
Advertising . . . . .	2 05

Paid James Doherty under contract:

508 square yards prepar- ing site @ 33c. . .	\$167 64
112 cubic yards concrete base furnished and laid @ \$4.53 . . .	507 36
508 square yards wood block pavement furnished and laid @ \$2.70 . . .	1,371 60
Extra work — Haul old granite blocks to Massachusetts avenue lot instead of to yard No. 2:	
210.29 tons old granite blocks hauled to Massachusetts avenue lot, one mile overhaul, per half mile, per ton, @ 11c. . . . .	46 26

2,092 86	
\$2,153 70	
247 40	—

Paid by estate of E. S. Converse, \$2,046.60.

*Round Hill street, from Walden to Gay Head streets. Length, 642 linear feet. Area, 1,083 square yards. Macadam roadway resurfaced, edgestone set, gutter paved, brick sidewalk laid. Work done in part by Commonwealth Construction Company and in part by division force.*

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Labor, macadam excavation . . . . .	\$253 50
Labor, macadam spreading . . . . .	71 37
Labor, cleaning street . . . . .	6 76
Steam roller . . . . .	16 25
Water cart . . . . .	14 70
Teaming . . . . .	134 85
Advertising . . . . .	4 10
Edgestone, 53 feet 6 inches, circular; 1,198 feet 6 inches, straight; 2 small corners and 2 large corners . . . . .	923 85
Blocks, 15,480 . . . . .	309 60
Bricks, 29,400 . . . . .	352 80
Crushed stone, 76.22 tons . . . . .	105 36
Paid Commonwealth Construction Company under contract:	
1,200 linear feet straight edgestone hauled and set @ 25c. . . . .	\$300 00
75 linear feet circular edgestone set @ 15c. . . . .	11 25
69 linear feet existing edgestone reset @ 15c. . . . .	10 35
360 square yards granite block p a v i n g hauled and laid @ 50c. . . . .	180 00
20 square yards existing granite block pav- ing relaid @ 40c.,	8 00
601 square yards brick sidewalks laid @ 30c. . . . .	180 30
15 square yards existing brick sidewalks re- laid @ 25c. . . . .	3 75
	<hr/>
	\$693 65
Less 15 per cent retained . . . . .	104 05
	<hr/>
	589 60
	<hr/>
	\$2,782 74

*Rowena street, from Carruth to Bushnell streets. Length, 414 linear feet. Area, 920 square yards. Macadam surface laid, edgestone set, gutters paved and crosswalks laid by division force; artificial stone sidewalks laid by Adams-Pond Company.*

Labor, edgestone excavation . . . . .	\$173 25
Labor, edgestone setting . . . . .	98 27
Labor, gutter excavation . . . . .	59 38
Labor, gutter paving . . . . .	114 98
Labor, sidewalks . . . . .	10 75
Labor, macadam spreading . . . . .	95 88
Labor, crosswalk excavation . . . . .	19 50
Labor, crosswalk relaying . . . . .	47 87
Labor, engineering . . . . .	4 73
Labor, inspection . . . . .	10 50
Engineering expense . . . . .	15
Teaming . . . . .	320 17
Steam roller . . . . .	84 50
Water cart . . . . .	22 75
Edgestone, 770 feet 4 inches and 2 small corners . . . . .	543 23
Blocks, 10,550 . . . . .	211 00
Gravel, 58 double loads . . . . .	113 10
Cement, $\frac{1}{2}$ barrel . . . . .	88
Crushed stone, 213.17 tons . . . . .	282 05
Flagging, 107 feet 5 inches . . . . .	73 04
Paid Adams-Pond Company, under contract:	
5,286 square feet artificial stone side- walks furnished and laid @ 16c. . . . .	845 76
	<u>\$3,131 74</u>

*Saratoga, Moore and Bennington streets, around church of "Star of the Sea."* Artificial stone sidewalks laid and edgestone reset. Length, 578 linear feet. Area, 4,343 square feet.

Engineering . . . . .	\$6 00
Inspection . . . . .	26 25
Engineering expense . . . . .	87
Advertising . . . . .	4 10
Teaming . . . . .	24 50
Gravel, 12 tons . . . . .	9 60
Sand, 1 single load . . . . .	84
Edgestone, 22 feet . . . . .	15 40
Cement, $\frac{1}{2}$ barrel . . . . .	95
Blocks, 2,670 . . . . .	53 40
Amount paid to David M. Biggs & Co., under contract:	
4,343 square feet artificial stone side- walks furnished and laid @ 18c. . . . .	781 74
	<u>\$923 65</u>

*School street (Dorchester), from Washington to Athelwold streets.*  
Area, 3,952 square feet. Artificial stone sidewalks laid,  
edgestone reset and gutters repaved.

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Inspection . . . . .	\$39 00
Inspection expenses . . . . .	40
Advertising . . . . .	3 90
Paid W. A. Murtfeldt Company, under contract:	
3,952 square feet artificial stone sidewalks furnished and laid @ \$1.49 . . . . .	\$588 85
Extra work—reset edgestone and relay granite block paving where directed:	
111 linear feet edgestone re-set @ 10c. . . . .	\$11 10
38 square yards granite block paving relaid @ 33c. . . . .	12 54
	23 64
	612 49
	<u>\$655 79</u>

*South Market street, from Commercial street to Atlantic avenue. Length, 689 linear feet. Area, 3,188 square yards. Roadway repaved with new large granite blocks on a concrete base and regulated. Work done in 1909.*

Engineering . . . . .	\$12 00
Paid J. B. O'Rourke & Co., under contract:	
3,179 square yards preparing site @ 30c. . . . .	\$953 70
1,108 linear feet existing edgestone reset @ 15c. . . . .	166 20
3,179 square yards concrete base furnished and laid @ 71c. . . . .	2,257 09
48 square yards existing granite block paving relaid, gravel joints, @ 45c. . . . .	21 60
<i>Carried forward . . . . .</i>	<i>\$3,398 59</i>
	\$12 00

<i>Brought forward</i>		\$3,398 59	\$12 00
3,109 square yards granite block paving furnished and laid, pitch joints, @ \$2.69 . . .		8,363 21	
73 square yards existing granite block paving relaid, pitch joints, @ \$1,		73 00	
57 square yards flagging crosswalks furnished and laid, pitch joints, @ \$5,		285 00	
21 square yards existing flagging crosswalks relaid, pitch joints, @ \$1 . . .		21 00	
893 square yards existing brick sidewalks replaced @ 30c. . . . .		267 90	
	—	12,408 70	
Extra work—Lay brick and flagging sidewalks in cement where directed:			
1½ days, paver, @ \$5, . . . . .		\$7 50	
3 days' labor @ \$2, . . . . .		6 00	
	—	13 50	
Plus 15 per cent on \$13.50, . . . . .		2 03	
2¾ barrels cement @ \$1.75 . . . . .		4 81	
10 cubic feet sand @ 5c. . . . .		50	
Extra work—Bar and ram sewer trench:			
3½ days' labor @ \$2, . . . . .		\$6 25	
Plus 15 per cent on \$6.25 . . . . .		94	
	—	7 19	
Extra work — Reset catch- basin:			
1 day, mason, @ \$5.60 . . . . .		\$5 60	
1 day, tender, @ \$2, . . . . .		2 00	
	—	7 60	
Plus 15 per cent on \$7.60 . . . . .		1 14	
½ barrel cement @ \$1.75 . . . . .		88	
	—	\$12,458 35	
<i>Carried forward</i>			

<i>Brought forward . . . . .</i>	\$12,458 35
Less 34.08 tons beach gravel furnished by the city @ 80c.,	27 26
	<hr/>
	\$12,431 09
Less amount paid in 1909 . . . . .	11,785 70
	<hr/>
	\$645 39

*Washington street, from Green street to the Arborway.* Length, 3,442 linear feet. Area, 11,713 square yards. Paved with special size granite blocks on a concrete base and regulated. (Work begun in 1909.)

Engineering . . . . .	\$325 01
Inspection . . . . .	730 25
Labor (counting blocks) . . . . .	578 25
Engineering expense . . . . .	8 50
Blocks, 233,056 . . . . .	15,614 75
Edgestone, 2,383 feet 5 inches . . . . .	1,655 77
Bricks, 1,800 . . . . .	21 90

Paid John F. O'Connell, under contract:

12,339 square yards preparing site @ 18c. . . . .	\$2,221 02
4,696 linear feet straight edgestone set and hauled @ 23c. . . . .	1,080 08
240 linear feet circular e d g e s t o n e furnished and set @ \$1.40 . . . . .	336 00
1,577 linear feet existing edgestone reset @ 12c. . . . .	189 24
12,266 square yards concrete base furnished and laid @ 68c. . . . .	8,340 88
17 square yards existing g r a n i t e block paving re-laid, g r a v e l joints, @ 30c. . . . .	5 10
11,854 square yards granite block paving laid, pitch joints, @ 71c. . . . .	8,416 34

*Carried forward . . . . .* \$20,588 66 \$18,934 43

<i>Brought forward . . .</i>	\$20,588 66	\$18,934 43
10 square yards existing granite block paving relaid, groove joints, @ 50c. . .	5 00	
341.5 square yards flagging crosswalks furnished and laid, pitch joints, @ \$4.30,	1,468 45	
179 square yards existing brick sidewalks relaid @ 30c. . .	53 70	
91 square yards brick block paving furnished and laid @ \$1 . . .	91 00	
	<hr/>	
		\$22,206 81
Extra work—Excavate and remove surplus material left by Sewer Division:		
1,716 square yards surplus material removed @ 9c.,	154 44	
Extra work—Excavate rock in edgestone trench where directed:		
4.6 cubic yards rock excavated @ \$1.75 . . .	8 05	
Extra work—Cut tree stumps and old trench sheathing below grade as directed:		
7½ days' labor @ \$2 . . .	\$15 75	
Plus 15 per cent on \$15.75 . . .	2 36	
	<hr/>	
		18 11
<i>Carried forward . . .</i>	\$22,387 41	\$18,934 43

<i>Brought forward</i>	. . .	\$22,387 41	\$18,934 43
Extra work—Cut edge stone at elevated piers:			
14 days, stone- cutter, @			
\$4.50 . . .	\$63 00		
Plus 15 per cent on			
\$63 . . .	9 45		
	—	72 45	
	—		
		\$22,459 86	
Less amount paid in 1909 . . .	6,145 84		
	—	16,314 02	
	—		
		\$35,248 45	
Credit: 1,405 old blocks @ \$20 M.		28 10	
	—		
		\$35,220 <sup>35</sup>	

*Washington street, from north side of Arborway to beyond New York, New Haven & Hartford Railroad. Length, 1,445 linear feet. Area, 7,717 square yards. Paved with special size blocks on a concrete base and regulated.*

Engineering . . . . .	\$213 24
Inspection . . . . .	431 50
Engineering expense . . . . .	6 60
Edgestone, 707 feet 1 inch straight; 233 feet 10 inches circular and 2 small corners . . . . .	741 45
Teaming . . . . .	2 50
Bricks, 3,500 . . . . .	41 65
Paid James Doherty, under con- tract:	
8,037 square yards prepar- ing site @ 23c. . . . .	\$1,848 51
710 linear feet straight edgestone hauled and set @ 24c. . . . .	170 40
242 linear feet circular edgestone set @ 18c. . . . .	43 56
885 linear feet existing edgestone reset @ 14c. . . . .	123 90
	—
<i>Carried forward</i> . . . . .	\$2,186 37 \$1,436 94

<i>Brought forward</i>	. . . . .	\$2,186 37	\$1,436 94
8,042 square yards concrete base furnished and laid @ 62c.	. . . . .	4,986 04	
111 square yards existing granite block paving relaid, gravel joints, @ 45c.	. . . . .	49 95	
7,772 square yards granite block paving furnished and laid, pitch joints, @ \$2.73	. . . . .	21,081 06	
311 square yards flagging crosswalks furnished and laid, pitch joints, @ \$4.39	. . . . .	1,365 29	
833 square yards existing brick sidewalks re-laid @ 25c.	. . . . .	208 25	
	. . . . .	29,876 96	
Extra work—Furnish and build fence and concrete cap on retaining wall at the southeast corner of Morton street:			
Furnishing and building fence, etc.	. . . . .	270 00	
Extra work—Grade filling on sidewalk where directed:			
$\frac{1}{2}$ day labor @ \$2	. . . . .	1 00	
Plus 15 per cent on \$1	. . . . .	15	
Extra work—Cut old concrete where found too high for new construction:			
5 $\frac{1}{2}$ days' labor @ \$2	. . . . .	11 00	
Plus 15 per cent on \$11	. . . . .	1 65	
	. . . . .	\$31,597 70	
Credit: 31,436 old blocks @ \$20 M.	. . . . .	628 72	
	. . . . .	\$30,968 98	

*Washington street, from Williams to Marvin streets (west side). Length, 1,050 linear feet. Area, 8,053 square feet. Artificial stone sidewalks laid and edgestone reset.*

Engineering	. . . . .	\$21 00
Inspection	. . . . .	75 00
	. . . . .	\$96 00

## STREET DEPARTMENT — HIGHWAY DIVISION. 129

<i>Brought forward</i>		\$96 00
Engineering expense		1 15
Advertising		3 80
Edgestone, 4 feet 8 inches		3 27
Teaming		32
Paid Jeremiah J. Sullivan, under contract:		
8,053 square feet artificial stone sidewalks laid @ 17c.	\$1,369 01	
131 linear feet edgestone reset @ 15c.	19 65	
22 square yards granite block paving re-laid @ 25c.	5 50	
		1,394 16
Extra work — Remove granite flag from sidewalk where directed:		
4 hours, foreman, @ 62½c.	\$2 50	
36 hours' labor @ 25c.,	9 00	
		11 50
Plus 15 per cent on \$11.50.	1 73	
		<u>\$1,511 93</u>

Welles avenue, from Argyle street to Talbot avenue. Length, 282 linear feet. Area, 1,253 square yards. Constructed 6 inch macadam roadway, edgestone set, gutters paved, crosswalks laid and artificial stone sidewalks with loam spaces built.

Engineering	\$47 23
Inspection	109 25
Engineering expense	1 30
Edgestone, 7 feet 8 inches	5 36
Flagging, 67 feet	45 56
Paid William J. Rafferty & Co., under contract:	
Removing trees, bushes, stumps, etc.	\$1 00
508 cubic yards subgrading (earth excavation) @ 45c.	228 60
411 linear feet straight edgestone furnished and set @ 95c.	390 45
<i>Carried forward</i>	\$620 05
	\$208 70

<i>Brought forward</i>		\$620 05	\$208 70
6 linear feet circular edgestone f u r - nished and set @ \$1.26 . . .		7 56	
157 linear feet existing edgestone reset @ 12c. . . .		18 84	
152 square yards granite block paving fur- nished and laid @ \$1.82 . . .		276 64	
151 square yards existing granite block pav- ing relaid @ 40c.,		60 40	
11 square yards flag- ging crosswalks hauled and laid @ 90c. . . .		9 90	
86 square yards existing flagging c r o s s - walks relaid @ 50c.,		43 00	
1,135 square yards mac- adam surface fur- nished and placed @ 72c. . . .		817 20	
3,478 square feet artificial stone side w a l k s furnished and laid @ 15c. . . .		521 70	
1 cover reset @ \$3 . . .		3 00	
154 square yards l o a m spaces furnished, placed and seeded, @ 50c. . . .		77 00	
<hr/>			2,455 29
Extra work — Re- move tree:			
78 hours' labor @ 25c.,	\$19 50		
34 hours, foreman, @ 62½c. . . .	21 25		
<hr/>			
Plus 15 per cent on \$40.75 . . .	40 75		
2 hours double team @ 75c. . .	6 11		
Extra work — Replace the mac- adam surface around the new water box at Talbot avenue, replacing macadam as per agreement . . . .	1 50		
<hr/>			
	5 00		
	<hr/>		\$2,717 35

*Hyde Park avenue*, from about 300 feet north of Ashland street to Hyde Park line. Length, 2,224 feet. Area, 9,981 square yards. Constructed 6-inch macadam roadway, subgraded and filled, edgestone set, block gutters laid, flagging crosswalks laid and crushed stone sidewalks placed. Work done under chapter 437 of the Acts of 1908.

Engineering . . . . .	\$580 62
Inspection . . . . .	656 25
Engineering expense . . . . .	15 70
Advertising . . . . .	3 50
Edgestone, 4,160 feet straight; 263 feet circular and 10 large corners . . .	3,217 14
Teaming . . . . .	7 28
Amount paid West Roxbury Trap Rock Company, under contract:	
Removing trees, bushes, stumps, etc. . . . .	\$0 00
2,065 cubic yards sub- grading (earth ex- cavation) @ 50c.,	1,032 50
89 cubic yards sub- grading (rock ex- cavation) @ \$1.75,	155 75
10,912 cubic yards filling furnished @ $65\frac{1}{2}$ c.,	7,147 36
4,128 linear feet straight edgestone hauled and set @ 23c. . .	949 44
303 linear feet circular edgestone set @ 15c. . . . .	45 45
162 linear feet existing edgestone reset @ 15c. . . . .	24 30
1,947 square yards gran- ite block paving furnished and laid @ \$2 . . . . .	3,894 00
214 square yards exist- ing block paving relaind @ 25c. . .	53 50
179 square yards flag- ging crosswalks furnished and laid @ \$4.50 . . . . .	805 50
<i>Carried forward</i> . . . . .	<hr/> \$14,107 80    \$4,480 49

<i>Brought forward</i>	. . . . .	\$14,107 80	\$4,480 49
8,508 square yards mac-			
adam surface fur-			
nished and placed			
@ 53c. . . . .	4,509 24		
6,514 s q u a r e y a r d s			
crushed stone,			
sidewalks fur-			
nished and placed,			
@ 38c. . . . .	2,475 32		
41 covers reset @ \$3 .	123 00		
E x t r a w o r k —			
Water street as			
directed:			
16 $\frac{3}{4}$ days' water cart @			
\$5 . . . . .	83 75		
Extra work — Re-			
locate boundary			
line monument at			
the Hyde Park			
line:			
5 hours, foreman,			
@ 50c. . . \$2 50			
20 hours' labor			
@ 25c. . . 5 00			
—	7 50		
Plus 15 per cent on			
\$7.50 . . . . .	1 13		
—			
	\$21,307 74		
Less previous pay-			
ment in 1909 . . .	1,781 60		
—	19,526 14		
—	—	\$24,006 63	

*Old Colony avenue*, construction of, from Dorchester avenue to Dorchester street, and a part of D and West Ninth streets. Length, 2,528 feet. Area, 15,423 square yards. Six-inch macadam roadway constructed, edgestone set, block gutters laid, flagging crosswalks laid, brick sidewalks laid, gravel sidewalks placed, retaining wall taken down and rubble wall and fence built.

Engineering . . . . .	\$378 26
Inspection . . . . .	191 00
Engineering expense . . . . .	3 55
Advertising . . . . .	4 00

*Carried forward* . . . . . \$576 81

## STREET DEPARTMENT — HIGHWAY DIVISION. 133

<i>Brought forward</i>		\$576 81
Amount paid Fred S. & A. D. Gore Corporation, under contract:		
Removing trees, bushes, stumps, etc. . . . .	\$1 00	
12,822 cubic yards sub- grading (earth excavation) @ 33c. . . . .	4,231 26	
1,900 cubic yards filling furnished @ \$1, 115 linear feet straight edgestone f u r - nished and set @ 90c. . . . .	1,900 00	
217 linear feet circular edgestone f u r - nished and set @ \$1.30 . . . . .	103 50	
1,269 linear feet existing edgestone taken up and reset @ 15c. . . . .	282 10	
3,198 square yards granite b l o c k paving hauled and laid @ 33c. . . . .	190 35	
1,915 square yards exist- ing granite block paving taken up and relaid @ 33c.,	1,055 34	
288 square yards flag- ging crosswalks hauled and laid @ 33c. . . . .	631 95	
98 square yards exist- ing fl a g g i n g crosswalks taken up and relaid @ 33c. . . . .	95 04	
15,247 square yards mac- adam surface fur- nished and placed @ 65c. . . . .	32 34	
6,515 square yards gravel sidewalks placed @ 10c. . . . .	9,910 55	
<i>Carried forward</i> . . . . .	\$19,084 93	\$576 81

<i>Brought forward . . .</i>	\$19,084 93	\$576 81
747 square yards existing brick sidewalks taken up and relaid @ 25c. . . . .	186 75	
1,311 cubic yards existing retaining wall taken down @ 75c. . . . .	983 25	
828 cubic yards rubble wall built @ \$1.50 . . . .	1,242 00	
687 linear feet fence furnished and built @ 50c. . . .	343 50	
19 covers reset @ \$3, Extra work—Store inspector's shan- ty on July 4: Storing shanty . . .	57 00	
Extra work — Lay brick in cement on top of walls on D and W. Ninth streets:	5 00	
23 hours, mason, @ 70c. . . \$16 10		
4½ days, tender, @ \$2 . . . 8 25		
2½ days' labor @ \$2 . . . 5 00		
3 days, paver, @ \$5 . . . 15 00		
3¾ days, ram- mer, @ \$2, 7 50		
	51 85	
Plus 15 per cent on \$51.85 . . .	7 78	
22 bags Portland ce- ment . . . .	8 80	
Extra work — Fur- nish and set sec- ond-hand edge- stone and furnish and lay granite block paving at		
<i>Carried forward . . .</i>	\$21,970 86	\$576 81

<i>Brought forward</i>	. . .	\$21,970 86	\$576 81
E street and at driveway:			
38 linear feet second- hand edgestone furnished and set @ 50c. . .		19 00	
10.7 square yards sec- ond-hand granite blocks furnished and laid @ \$1.08,		11 56	
Extra work — Re- move existing concrete tunnel at E street:			
5½ days, foreman, @ \$5 . . .	\$28 13		
15 days' labor @ \$2 . . .	30 00		
	—	58 13	
Plus 15 per cent on \$58.13 . . .		8 72	
3 days, double team, @ \$6 . . .		18 00	
½ case dynamite @ \$13.50 . . .		6 75	
10 bars sharpened @ 10c. . . .		1 00	
10 picks sharpened @ 10c. . . .		1 00	
75 drills sharpened @ 4c. . . .		3 00	
Extra work—Plas- ter with mortar where required the foundation walls of houses on D and W. Ninth streets:			
7 hours, mason, @ 60c. . .	\$4 20		
1½ days' labor @ \$2 . . .	3 25		
	—	7 45	
Plus 15 per cent on \$7.45 . . .		1 12	
14 bags Portland ce- ment @ 40c. . .		5 60	
	—	—	
<i>Carried forward</i>	. . .	\$22,112 19	\$576 81

Brought forward . . .	\$22,112 19	\$576 81
Extra work—Re-build three (3) catch-basins at D street:		
39 hours, mason, @ 70c. . \$27 30		
10 days' labor @ \$2 . 20 00	47 30	
Plus 15 per cent on \$47.30 . . .	7 10	
$\frac{1}{4}$ day, double team, @ \$6 . . .	1 50	
5 barrels Portland cement @ \$1.60 .	8 00	
1,000 bricks @ \$9 . .	9 00	
Extra work—Raise catch-basin at E street over 6 inches:		
4 $\frac{1}{2}$ hours, mason, @ 70c. . \$3 15		
1 day, tender, @ \$2 . 2 00	5 15	
Plus 15 per cent on \$5.15 . . .	77	
$\frac{1}{2}$ barrel Portland cement @ \$1.60 .	80	
Extra work—Haul filling from Massachusetts avenue:		
602 cubic yards filling hauled @ 50c. .	301 00	
		\$22,492 81
Less amount deducted for surplus stone from walls . . .	100 00	
		\$22,392 81
Less amounts paid in 1908 and 1909, 15,771 32		
		6,621 49
		\$7,198 30

STREETS CONSTRUCTED UNDER CHAPTER  
393 OF THE ACTS OF 1906 AND THE COST  
CHARGED TO APPROPRIATION FOR HIGH-  
WAYS, MAKING OF.

*Addison street, from Saratoga street to the northwesterly line  
of Pope street, extended. (Work not finished.)*

Engineering . . . . .	\$211 23
Inspection . . . . .	82 50
Engineering expense . . . . .	36
Advertising . . . . .	3 80
Amount paid James Doherty, under contract:	
3,000 cubic yards filling fur- nished @ 90c. . . . .	\$2,700 00
Less 5 per cent retained, . . . . .	135 00
	2,565 00
	<u>\$2,862 89</u>

*Ainsworth street (formerly Bradford terrace), from Centre to  
South streets. (Work not started.)*

Engineering . . . . .	\$112 03
Advertising . . . . .	12 33
	<u>\$124 36</u>

*Aldrich street, from Belgrade avenue to Beech street. Length,  
1,754 feet. Area, 5,140 square yards. Constructed  
6-inch macadam roadway, edgestones set, granite block  
gutters laid, flagging crosswalks laid, loam placed and  
artificial stone sidewalks laid.*

Engineering . . . . .	\$237 00
Inspection . . . . .	235 00
Engineering expense . . . . .	4 70
Advertising . . . . .	4 10
Crushed stone, 40.6 tons . . . . .	45 67
Edgestone, 80 feet 3 inches straight, 6 small corners and 77 feet 10½ inches circles . . . . .	171 22
Flagging, 318 feet 8 inches . . . . .	216 69
Amount paid West Roxbury Trap Rock Company, under contract:	
Removing, trees, bushes, stumps, etc. . . . .	\$0 00
2,196 cubic yards subgrading (earth excavation) @ 62c. . . . .	1,361 52
<i>Carried forward</i> . . . . .	\$1,361 52
	\$914 38

<i>Brought forward</i>		\$1,361 52	\$914 38
96 linear feet straight edge-stone hauled and set @ 40c.		38 40	
78 linear feet circular edge-stone set @ 20c.		15 60	
91 linear feet existing edge-stone reset @ 20c.		18 20	
1,530 square yards granite block paving furnished and laid @ \$2		3,060 00	
73 square yards existing block paving relaid @ 30c.		21 90	
70 square yards flagging crosswalks hauled and laid @ 75c.		52 50	
43 square yards existing flagging crosswalks relaid @ 25c.		10 75	
3,882 square yards macadam surface furnished and placed @ $62\frac{1}{2}$ c.		2,426 25	
15,479 square feet artificial stone sidewalks furnished and laid @ 14c.		2,167 06	
184.7 linear feet artificial stone curbs furnished and laid @ 85c.		157 00	
516 square yards loam spaces, furnished, placed and seeded @ 28c.		144 48	
20 covers reset @ \$3		60 00	
			9,533 66
Extra work — Build under-drains to connect the cinder foundations of the artificial stone sidewalks with the catch-basins, where directed:			
32 hours' labor @ 25c.		\$8 00	
Plus 15 per cent on \$8		1 20	
			9 20
4 tons crushed stone @ \$1.50		\$6 00	
100 feet 6-inch pipe @ 15c.		15 00	
<i>Carried forward</i>		\$21 00	\$10,457 24

## STREET DEPARTMENT — HIGHWAY DIVISION. 139

<i>Brought forward</i>	. . . . .	\$21 00	\$10,457 24
6½-inch bends @ 50c.	. . . . .	3 00	
½ barrel cement @ \$2	. . . . .	1 00	
80 bricks @ \$12 M.	. . . . .	96	
	—		25 96
	—		<u>\$10,483 20</u>

*Alpha road*, from Waldeck street to Park street. Length, 958 feet. Area, 2,860 square yards. Constructed 6-inch macadam roadway, edgestones set, block gutters laid, flagging crosswalks laid, loam placed and artificial stone sidewalks laid.

Engineering	. . . . .	\$143 51
Inspection	. . . . .	160 00
Engineering expense	. . . . .	2 65
Advertising	. . . . .	11 45
Flagging, 95 feet 2 inches	. . . . .	64 71
Amount paid to James Doherty, under contract:		
2,108 cubic yards subgrading (earth excavation) @		
45c. . . . .		\$948 60
1 cubic yard subgrading (rock excavation) @		
\$1.75 . . . . .		1 75
1,063 linear feet straight edge-stone furnished and set @ 93c. . . . .		988 59
197 linear feet circular edge-stone furnished and set @ \$1.29 . . . . .		254 13
487 linear feet existing edgestone reset @		
15c. . . . .		73 05
625 square yards granite block paving furnished and laid @		
\$1.85 . . . . .		1,156 25
87 square yards existing granite block paving relaid @ 45c. . . . .		39 15
19 square yards flagging cross walks hauled and laid @ 85c. . . . .		16 15
24 square yards existing flagging crosswalks relaid @ 45c.,		10 80
<i>Carried forward</i>	. . . . .	<u>\$3,488 47</u>
		<u>\$382 32</u>

<i>Brought forward . . .</i>	\$3,488 47	\$382 32
2,267 square yards macadam surface furnished and placed @ 73c. . .	1,654 91	
6,874 square feet artificial stone sidewalks fur- nished and laid @ \$1.44 . . .	989 86	
372 square yards lo a m spaces furnished, placed and seeded @ 36c. . . . .	133 92	
5 covers reset @ \$3 . . .	15 00	
		6,282 16

Extra work—Omit the furnishing and setting of edgestones on a gravel foundation where directed and substitute the furnishing and setting of edge-stone on a concrete base with crushed stone foundation and make pipe connection with the catch-basin:

22 hours, edgestone setter, @ 62½c. . . . .	\$13 75	
51 hours, helper, @ 28½c.,	14 34	
22 hours' labor @ 25c. . .	5 50	
		33 59
Plus 15 per cent on \$33.59 . . .		5 04
11.8 tons crushed stone @ \$1.50 . . . . .	\$17 70	
4 barrels Portland ce- ment @ \$1.70 . . .	6 80	
1 double load sand @ \$1.80 . . . . .	1 80	
2 feet Akron sewer pipe @ 10c. . . . .	20	
146 linear feet s t r a i g h t edgestone @ 80c. . .	116 80	
112 linear feet c i r c u l a r edgestone @ \$1.20 .	134 40	
	277 70	
		\$6,980 81

*Alther street, from Hampden street to Reading street. Length, 258 feet. Area, 397 square yards. Constructed 6-inch macadam roadway, set edgestone, block gutters laid, flagging crosswalks laid and brick sidewalks laid.*

## STREET DEPARTMENT — HIGHWAY DIVISION. 141

Engineering . . . . .	\$64 12
Inspection . . . . .	37 00
Engineering expense . . . . .	90
Advertising . . . . .	11 16
Edgestone, 475 feet 1 inch and 2 large corners . . . . .	344 56
Flagging, 26 feet 6 inches . . . . .	18 02
Blocks, 2,990 . . . . .	59 80
Bricks, 5,200 . . . . .	62 40
Amount paid James Doherty, under contract:	
Removing trees, bushes, stumps, etc.,	\$5 00
213 cubic yards subgrading (earth excavation) @ 60c. . . . .	127 80
476 linear feet straight edgestone hauled and set @ 20c. . . . .	95 20
10 linear feet circular edgestone set @ 15c.,	1 50
75 linear feet existing edgestone reset @ 15c. . . . .	11 25
148 square yards granite block paving hauled and laid @ 57c. . . . .	84 36
21 square yards existing granite block paving relaid @ 45c. . . . .	9 45
6 square yards flagging crosswalks hauled and laid @ 69c.	4 14
5 square yards existing flagging crosswalks relaid @ 40c. . . . .	2 00
217 square yards macadam surface furnished and placed @ 80c. . . . .	173 60
111 square yards brick sidewalks laid @ 43c. . . . .	47 73
38 square yards brick sidewalks relaid @ 35c. . . . .	13 30
2 covers reset @ \$3 . . . . .	6 00
	581 33
	—————
	\$1,179 29

*Antrim street, from Bennington street to Ashley street. Length, 341 feet. Area, 1,045 square yards. Constructed 6-inch macadam roadway, edgestone set, brick sidewalks laid, block gutters laid and flagging crosswalks laid.*

Engineering . . . . .	\$115 60
Inspection . . . . .	253 50
Engineering expense . . . . .	3 59
Advertising . . . . .	10 44
Edgestone, 18 feet 10 inch, circles and 4 small corners . . . . .	30 40
Flagging, 97 feet 10 inches . . . . .	66 53
Bricks, 19,750 . . . . .	247 50
Steam roller . . . . .	58 50
Amount paid J. H. McCarthy, under contract:	
R e m o v i n g   t r e e s , b u s h e s , s t u m p s , e t c . ,	\$1 00
78 cubic yards subgrad- i n g (e a r t h   e x c a v a - t i o n) @ 40c. . . . .	31 20
1,305 cubic yards filling f u - r n i s h e d @ 70c. . . . .	913 50
542 linear feet straight e d g e s t o n e f u r n i s h e d a n d s e t @ \$1 . . . . .	542 00
32 linear feet c i r c u l a r e d g e s t o n e s e t @ 20c.,	6 40
132 linear feet existing e d g e s t o n e r e s e t @ 20c. . . . .	26 40
211 square yards granite b l o c k p a v i n g f u r - n i s h e d a n d l a i d @ \$1.90 . . . . .	400 90
63 square yards existing g r a n i t e b l o c k p a v i n g r e l a i d @ 35c. . . . .	22 05
20 square yards flagging c r o s s w a l k s f u r n i s h e d a n d l a i d @ \$4 . . . . .	80 00
17 square yards existing f l a g g i n g c r o s s w a l k s r e l a i d @ 50c. . . . .	8 50
786 square yards macadam s u r f a c e f u r n i s h e d a n d p l a c e d @ 80c. . . . .	628 80
408 square yards brick s i d e w a l k s l a i d @ 35c.,	142 80
<i>Carried forward . . . . .</i>	<i>\$2,803 55</i>
	<i>\$786 06</i>

## STREET DEPARTMENT — HIGHWAY DIVISION. 143

<i>Brought forward . . . . .</i>	\$2,803 55	\$786 06
141 square yards existing		
brick sidewalks re-		
laid at 30c. . . . .	42 30	
3 covers reset @ \$3 . . .	9 00	
		\$2,854 85
Less 97 feet 10		
inches linear		
feet North		
River flagg-		
ing furnish-		
ed by the		
city @ 68c.,	\$66 53	
Less 4½ days		
use of city		
steam roller,	58 50	
	125 03	
		2,729 82
Extra work — Furnish and set		
gutter mouth stone at west-		
erly corner of Ashley street:		
7 linear feet edgestone		
furnished and set @		
\$1 . . . . .	\$7 00	
1 day, stonemason, @		
\$4.80 . . . . .	4 80	
Plus 15 per cent on		
\$4.80 . . . . .	72	
	12 52	
		\$3,528 40
Less for old blocks to stock 550		
@ \$20 M. . . . .	11 00	
		\$3,517 40
<i>Ardale street (formerly Arundel street), Centre street to Walter</i>		
<i>street. (Work not started.)</i>		
Engineering . . . . .	\$18 75	
Advertising . . . . .	6 54	
		\$25 29

*Avenue Louis Pasteur, from Longwood avenue to the Fenway.*  
*Length, 1,335 feet. Area, 9,800 square yards. Constructed*  
*6-inch tar macadam roadway, edgestones set, block gutters*  
*laid, brick gutters laid, brick crosswalks laid, loam placed*  
*and artificial stone sidewalks laid.*

Engineering . . . . .	\$454	40	
Inspection . . . . .	404	75	
Engineering expense . . . . .	8	55	
Advertising . . . . .	3	70	
Labor, street cleaning by department force . . . . .	9	63	
Labor, spreading tarvia by department force . . . . .	106	88	
Tarvia, 2,190 gallons and cartage . . . . .	160	60	
Teaming on tarvia work . . . . .	30	02	
Steam roller . . . . .	58	50	
Blocks, 2,175 . . . . .	97	88	
Bricks, 2,000 . . . . .	24	00	
Edgestone, special, 2,357 feet straight and 768 feet circular . . . . .	6,842	35	
Crushed stone, 80 $\frac{1}{4}$ tons . . . . .	106	66	
Amount paid James Doherty, under contract:			
Removing trees, bushes, stumps, etc. . . . .	\$10	00	
6,315 cubic yards subgrading (earth excavation) @ 41c. . . . .	2,589	15	
100 cubic yards filling furnished @ 10c. . . . .	10	00	
2,357 linear feet straight edgestone set @ 15c., . . . . .	353	55	
774 linear feet circular edgestone set @ 16c., . . . . .	123	84	
32 linear feet existing edgestone reset @ 14c. . . . .	4	48	
57 square yards granite block paving hauled and laid, including concrete base and grout joints, @ \$1.33, . . . . .	75	81	
15 square yards existing granite block paving relaid @ 45c. . . . .	6	75	
873 square yards brick block paving furnished and laid @ \$1.73 . . . . .	1,510	29	
1,453 square yards brick crosswalks, including concrete base and grout joints furnished and laid, @ \$2.43 . . . . .	3,530	79	
<i>Carried forward</i> . . . . .	\$8,214	66	
		\$8,307	92

<i>Brought forward</i>	. . . . .	\$8,214 66	\$8,307 92
6,454 square yards tar mac-	adam surface fur-		
nished and placed @			
89c. . . . .	5,744 06		
3,296 square yards crushed	stone sidewalks fur-		
nished and placed @			
39c. . . . .	1,285 44		
37 square yards existing	brick sidewalks re-		
laid @ 25c. . . . .	9 25		
3,558 square yards lo a m	spaces placed and		
seeded @ 5c. . . . .	177 90		
5,970 cubic yards loam fur-	nished and placed @		
\$1.21 . . . . .	7,223 70		
860 square feet artificial	stone sidewalks laid		
@ 17c. . . . .	146 20		
26 covers reset @ \$3 . . . . .	78 00		
	<u>—</u>	<u>22,879 21</u>	
Extra work — Cut gutter mouths			
where directed:			
10 $\frac{3}{4}$ days, stonecutter, @			
\$5.50 . . . . .	\$59 13		
Plus 15 per cent on			
\$59.13 . . . . .	8 87		
	<u>—</u>	<u>68 00</u>	
Extra work — Furnish additional			
filling where directed:			
3,300 cubic yards filling furnished @			
52c . . . . .	1,716 00		
	<u>—</u>	<u>\$32,971 13</u>	
Less amount paid in 1909 . . . . .	6,536 50		
	<u>—</u>	<u><u>\$26,434 63</u></u>	

*Balfour street, from Wayland street to Dalkeith street. Length, 339 feet. Area, 1,117 square yards. Constructed 6-inch macadam roadway, edgestones set, block gutters laid, flagging crosswalks laid and artificial stone sidewalks laid.*

Engineering	. . . . .	\$85 01
Inspection	. . . . .	155 25
Engineering expense	. . . . .	1 65
Advertising	. . . . .	10 64
	<u>—</u>	
<i>Carried forward</i>	. . . . .	\$252 55

<i>Brought forward . . . . .</i>	\$252 55
Flagging, 115 feet . . . . .	78 20
Steam roller . . . . .	6 00

Amount paid Joseph B. O'Rourke & Co., under contract:

Removing trees, bushes, stumps, etc.,	\$5 00
651 cubic yards subgrading (earth excavation) @ 45c. . . . .	292 95
582 linear feet straight edgestone furnished and set @ 95c. . . . .	552 90
87 linear feet circular edgestone furnished and set @ \$1.50 . . . . .	130 50
94 linear feet existing edgestone reset @ 15c. . . . .	14 10
252 square yards granite block paving fur- nished and laid @ \$2 . . . . .	504 00
27 square yards existing granite block paving relied @ 50c. . . . .	13 50
25 square yards flagging crosswalks hauled and laid @ 75c. . . . .	18 75
12 square yards existing flagging crosswalks relied @ 50c. . . . .	6 00
24 square yards existing brick sidewalks relaid @ 50c. . . . .	12 00
803 square yards mace- adam surface fur- nished and placed @ 73c. . . . .	586 19
4,417 square feet artificial stone sidewalks fur- nished and laid @ 15c. . . . .	662 55
2 covers reset @ \$3 . . . . .	6 00
	<hr/>
	\$2,804 44
Less $\frac{1}{2}$ day use of city steam roller @ \$12, . . . . .	6 00
	<hr/>
	2,798 44
	<hr/>
	\$3,135 19

*Beaumont street*, from Adams street to Carruth street. Graded, constructed 6-inch macadam roadway, edgestone set, block gutters laid, sidewalks excavated; work done and materials furnished by the city. 2,969 linear feet straight edgestone set, 259 linear feet straight edgestone reset, 110 linear feet circular edgestone set, 43 linear feet circular edgestone reset, 45 square yards flagging crosswalks laid, 16 square yards flagging crosswalks relaid, 1,180 square yards granite block paving laid, 27 square yards granite block paving relaid, 2,833 square yards macadam surface furnished and placed, 1,944 square yards sidewalk excavation. Artificial stone sidewalks laid by contractor.

Engineering . . . . .	\$16 26
Inspection . . . . .	22 50
Engineering expense . . . . .	15
Advertising . . . . .	18 47
Edgestone, 555 feet 2 inches; 65 feet 9 inches, circles and 4 small corners,	308 03
Sand, 69 double loads . . . . .	138 00
Gravel, 187 double loads, 1 single load,	356 85
Crushed stone, 757.77 tons . . . . .	924 48
Flagging, 215 feet . . . . .	146 20
Blocks, 5,230 . . . . .	104 60
Cement, 3 bags . . . . .	1 32
Lumber, 55 feet . . . . .	1 49
Steam roller . . . . .	331 50
Water cart . . . . .	71 75
Carting edgestone and teaming . . . . .	1,302 57
Edgestone excavating . . . . .	514 17
Edgestone setting . . . . .	384 08
Sidewalk excavating . . . . .	187 13
Gutter excavating . . . . .	255 22
Gutter paving . . . . .	326 00
Crosswalks excavating . . . . .	28 62
Crosswalks paving . . . . .	77 62
Roadway excavating . . . . .	438 76
Spreading macadam, roadway . . . . .	294 77
Spreading crushed stone, sidewalks . . . . .	21 99
Amount paid Adams-Pond Company, under contract:	
10,977 square feet artificial stone sidewalks fur- nished and laid @ 15c. . . . .	\$1,646 55
Extra work— Remove tree and replace fence as directed: 37 hours, fore- man, @ 50c., \$18 50	
<i>Brought forward</i> . . . . .	\$18 50 \$1,646 55 \$6,272 53

<i>Brought forward . . . . .</i>	\$18 50	\$1,646 55	\$6,272 53
126 hours' labor @ 25c. . . . .	<u>31 50</u>	50 00	
Plus 15 per cent on \$50 . . . . .		7 50	
5 hours, double team, @ 75c . . . . .	<u>3 75</u>		
		<u>1,707 80</u>	<u>\$7,980 33</u>

*Benton street, from Tremont street to Columbus avenue. (Work done in 1909.)*

Engineering . . . . .	<u>\$1 25</u>
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*Berkeley street, from Providence street to Columbus avenue. (Work not started.)*

Engineering . . . . .	<u>\$60 25</u>
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*Brinsley street, formerly Hawes avenue, from Columbia road to Washington street. (Work not started.)*

Engineering . . . . .	\$125 75
Advertising . . . . .	12 31
	<u>\$138 06</u>

*Bucknam street, from Fisher avenue to Lawn street. (In process of construction.) Subgraded and edgestone set.*

Engineering . . . . .	\$90 51
Inspection . . . . .	38 25
Engineering expenses . . . . .	1 00
Advertising . . . . .	13 05

Amount paid J. C. Coleman & Sons

Company, under contract:

85 cubic yards subgrading (earth excavation) @ 60c. . . . .	\$51 00
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408 linear feet straight edgestones furnished and set @ \$1.25 . . . . .	510 00
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129 linear feet circular edgestones furnished and set @ \$1.50 . . . . .	193 50
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24 linear feet existing edgestones reset @ 25c. . . . .	6 00
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<i>Carried forward . . . . .</i>	\$760 50	\$142 81
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<i>Brought forward</i>	\$760 50	\$142 81
Less 5 per cent re-		
tained	38 03	
	<hr/>	
	722 47	
	<hr/>	
		<u>\$865 28.</u>

*Carmen street*, from Shafter street to Kilton street. (Work done in 1909.)

Amount of balance due on contract of John McCourt & Co.	<u>\$500 00</u>
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*Chipman street*, from Norfolk street to Torrey street. (Work not started.)

Engineering	<u>\$51 85</u>
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*Clarkwood street*, from Blue Hill avenue to Norfolk street. (Work not finished.) Constructed 6-inch macadam roadway, subgraded, edgestone set, block gutters laid and artificial stone sidewalks laid.

Engineering	\$149 88
Inspection	149 75
Engineering expense	5 60
Advertising	10 64
Flagging, 115 feet	78 20
Amount paid to James H. McCarthy, under contract:	
950 cubic yards subgrad- ing (earth excav- ation) @ 40c.	\$380 00
50 cubic yards, subgrad- ing (rock excav- ation) @ \$1.75 .	87 50
1,950 linear feet straight edgestones furnished and set @ \$1 .	1,950 00
30 linear feet circular edgestones furnished and set @ \$1.45 .	43 50
650 square yards granite block paving fur- nished and laid @ \$1.63 .	1,059 50
20 square yards existing granite block paving re-laid @ 35c.	7 00
20 square yards flagging crosswalks hauled and laid @ \$1 .	20 00
<i>Carried forward</i>	\$3,547 50
	<hr/>
	\$394 07

<i>Brought forward . . . . .</i>	\$3,547 50	\$394 07
2,200 square yards macadam surface furnished and placed @ 75c.,	1,650 00	
3,030 square feet artificial stone sidewalks fur- nished and laid @ 12c. . . . .	363 60	
		<hr/>
	\$5,561 10	
Less 24 days' use of city horse roller @ \$1 . . . . .	24 00	
	<hr/>	
	\$5,537 10	
Less 5 per cent re- tained . . . . .	276 86	
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	5,260 24	
	<hr/>	
	\$5,654 31	

*Colberg avenue, from Belgrade avenue to Beech street. Length, 1,530 feet. Area, 4,500 square yards. Constructed 6-inch macadam roadway, edgestones set, block gutters laid, flagging crosswalks laid, loam placed and artificial stone sidewalks laid.*

Engineering . . . . .	\$230 87
Inspection . . . . .	241 89
Engineering . . . . .	3 65
Advertising . . . . .	4 20
Edgestone, 121 feet 3 inches and 115 feet of circles . . . . .	223 48
Flagging, 300 feet . . . . .	204 00

Amount paid West Roxbury Trap Rock  
Company, under contract:

Removing trees, bushes, stumps, etc.,	\$0 00
2,569 cubic yards subgrading (earth excavation) @ 62c. . . . .	1,592 78
1.2 cubic yards subgrad- ing (rock excavation) @ \$1.75 . . . . .	2 10
121 linear feet straight edgestone hauled and set @ 40c. . . . .	48 40
118 linear feet circular edge- stone set @ 20c. . . . .	23 60

*Carried forward . . . . .* \$1,666 88 \$908 09

<i>Brought forward . . .</i>	\$1,666 88	\$908 09
68 linear feet existing edgestone reset @ 20c. . . . .	13 60	
1,306 square yards granite block paving fur- nished and laid @ \$2, 35 square yards existing granite block paving relied @ 30c. . . . .	2,612 00	
67 square yards flagging crosswalks hauled and laid @ 75c. . . . .	50 25	
4 square yards existing flagging crosswalks relied @ 25c. . . . .	1 00	
3,443 square yards macadam surface furnished and placed @ $62\frac{1}{2}$ c., 431 square yards loam spaces furnished, placed and seeded @ 28c. . . . .	2,151 88	
13,029 square feet artificial stone sidewalks fur- nished and laid @ 14c. . . . .	120 68	
167.4 linear feet artificial stone curbs fur- nished and laid @ 85c. . . . .	142 29	
17 covers reset @ \$3 . . . . .	51 00	
	—	8,644 14
Extra work — Build underdrains to connect the cinder founda- tions of the artificial stone side- walks with the catch-basins where directed.		
28 hours' labor @ 25c. . . . .	\$7 00	
Plus 15 per cent on \$7, . . . . .	1 05	
	—	8 05
84 feet 6-inch pipe @ 15c., $1\frac{3}{4}$ bags cement @ 50c., 70 brick @ \$12 M. . . . .	\$12 60	
7 $\frac{1}{8}$ -inch bends @ 50c., $3\frac{1}{2}$ tons crushed stone @ \$1.50 . . . . .	88 84 3 50 5 25	
	—	23 07
	—	<u>\$9,583 35</u>

*Corona street*, from Bowdoin street to Geneva avenue. (Work done in 1909.)

Engineering . . . . .	<u>\$8 25</u>
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*Cottage terrace*, from East Cottage street to Marshfield street. (Work done in 1909.)

Engineering . . . . .	<u>\$3 25</u>
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*Covington street*, from East Eighth street to Columbia road. (Work done in 1909.)

Engineering . . . . .	\$9 25
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Balance, amount due Joseph B.	
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O'Rourke & Co., under contract:	
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3 $\frac{3}{4}$ days, double teams (hauling blocks), @	
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\$5 . . . . .	\$18 75
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Amount retained, 5 per cent . . . . .	81 98
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	<u>100 73</u>
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	<u>\$109 98</u>
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*Damrell street* (formerly Dorr street), from Dorchester avenue to Old Colony avenue. Length, 1,008 feet. Area, 3,000 square yards. Constructed roadway, brick block pavement, edgestones set, block gutters laid, brick sidewalks laid and flagging crosswalks laid.

Engineering . . . . .	\$242 55
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Inspection . . . . .	276 75
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Engineering expense . . . . .	5 00
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Advertising . . . . .	10 44
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Templets . . . . .	8 62
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Lumber, 501 feet . . . . .	13 53
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Bricks, 54,710 . . . . .	656 52
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Blocks, 46,790 . . . . .	935 80
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Flagging, 192 linear feet . . . . .	138 76
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Rebate, artificial stone sidewalk, 1,582 square feet @ 6c. . . . .	94 92
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Amount paid Central Construction Company, under contract:	
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Removing trees, bushes, stumps, etc. . . . .	\$1 00
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693 cubic yards subgrading (earth excavation) @ 40c. . . . .	277 20
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2,242 cubic yards subgrading (filling furnished) @ 25c. . . . .	560 50
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<i>Carried forward</i> . . . . .	\$838 70 \$2,382 89
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<i>Brought forward . . .</i>	\$838 70	\$2,382 89
1,789 linear feet straight edgestone furnished and set @ 93c. . .	1,663 77	
176 linear feet circular edgestone furnished and set @ \$1.33 . .	234 08	
185 linear feet existing edgestone reset @ 15c. . .	27 75	
1,316 square yards granite block paving hauled and laid @ 55c. . .	723 80	
311 square yards existing granite block paving re-laid @ 50c. . .	155 50	
14 square yards granite block paving hauled and laid, grout joints, including excavation, concrete base and gravel bed, @ 60c. . .	8 40	
40 square yards flagging crosswalks hauled and laid, gravel joints, @ 60c. . .	24 00	
1,760 square yards brick block pavement fur- nished and laid, in- cluding concrete base, sand bed and grout joints, @ \$2.45,	4,312 00	
1,139 square yards brick side- walks laid @ 28c. . .	318 92	
145 square yards existing brick sidewalks re- laid @ 28c. . .	40 60	
	<hr/>	
	\$8,347 52	
Extra work — Sheath wooden buildings with planks where directed:		
18 hours' labor @ 25c. . .	4 50	
Plus 15 per cent on \$4.50 . . .	68	
$\frac{1}{2}$ keg nails @ \$2.50 . . .	1 25	
	<hr/>	
<i>Carried forward . . .</i>	\$8,353 95	\$2,382 89

<i>Brought forward</i>	. . . . .	\$8,353 95	\$2,382 89
Extra work — Furnish and place the stone for macadam road- way at Old Colony avenue:			
9 hours' labor @ 25c.	. . . . .	2 25	
Plus 15 per cent on			
\$2.25	. . . . .	34	
36 tons crushed stone @			
\$1.50	. . . . .	54 00	
		\$8,410 54	
Less 8 days' use of city small steam roller @			
\$3	. . . . .	24 00	
		8,386 54	
			\$10,769 43

*Danville street*, from Bellevue street to Wren street. (Work not started.)

Engineering	. . . . .	\$29 75
Advertising	. . . . .	12 31
		\$42 06

*Deaconess road*, from Brookline avenue to Bellevue street.  
Length, 257 feet. Area, 953 square yards. Constructed  
6-inch macadam roadway, edgestones set, block gutters  
laid and artificial stone sidewalks laid.

Engineering	. . . . .	\$90 01
Inspection	. . . . .	102 00
Engineering expense	. . . . .	1 05
Advertising	. . . . .	10 54
Flagging	. . . . .	12 24
Teaming	. . . . .	1 26

Amount paid J. C. Coleman & Sons  
Company, under contract:

Removing trees, bushes, stumps, etc.	. . . . .	1 00
503 cubic yards subgrading (earth excavation) @ 45c.	. . . . .	226 35
3 cubic yards subgrading (rock excavation) @ \$1.75	. . . . .	5 25
558 linear feet straight edgestone fur- nished and set @ 98c.	. . . . .	546 84
35 linear feet circular edgestone furnished and set @ \$1.50	. . . . .	52 50
70 linear feet existing edgestone reset @ 20c.	. . . . .	14 00

*Carried forward* . . . . . \$1,063 04

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<i>Brought forward</i>	\$1,063 04
208 square yards granite block paving furnished and laid @ \$1.95,	405 60
36 square yards existing granite block paving relaid @ 50c.	18 00
4 square yards flagging crosswalks hauled and laid @ \$1	4 00
19 square yards existing flagging crosswalks relaid @ 50c.	9 50
685 square yards macadam surface furnished and placed @ 50c.	342 50
1 cover reset	3 00
Extra work—Omit brick sidewalks and substitute artificial stone sidewalks:	
3,770 square feet artificial stone sidewalks furnished and laid @ 16c.	603 20
	<u>\$2,448 84</u>

*Dighton street extension, from Circle to Chestnut Hill avenue.*  
Length, 285 feet. Area, 887 square yards. Constructed 6-inch macadam roadway, edgestone set, block gutters paved, flagging crosswalks laid and brick sidewalks laid. Brick supplied by the Schoolhouse Department. Work done and materials furnished by the city.

Advertising	\$0 98
Teaming	312 17
Roadway excavation	338 81
Edgestone excavation	101 75
Edgestone setting	140 75
Gutter excavation	27 60
Gutter paving	61 54
Crosswalk excavation	13 00
Crosswalk laying	70 50
Brickwalk excavation	20 37
Brickwalk laying	44 57
Sidewalk grading	56 62
Macadam spreading	137 88
Water carts	29 00
Steam rollers	92 00
Edgestone, 375 feet 6 inches, circles, 83 feet 9 inches	363 35
Gravel, 32 double loads	56 00
Lumber, 31 feet	84
Flagging, 138 feet 3 inches	94 01
Blocks, 7,990	159 80
Crushed stone, 307.7 tons	292 35
	<u>\$2,413 89</u>

*Dix place*, extension to Tremont street. (Work not started.)

Engineering . . . . .	\$7 75
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*Dorchester avenue*, corner Washington street. Widened. Edge-stone reset, gutters repaired and brick sidewalks relaid.

Engineering . . . . .	\$2 00
Labor . . . . .	108 25
Teaming . . . . .	40 55
Gravel, 6 double loads . . . . .	9 00
Edgestones, 29 feet 7 inches circles . . . . .	35 50
Blocks, 630 . . . . .	12 60
	_____
	\$207 90

*Edgar street*, from Parker street to Mechanic street. Length, 178 feet. Area, 492 square yards. Constructed 6-inch macadam roadway, edgestones set, block gutters laid, flagging crosswalks laid and artificial stone sidewalks laid.

Engineering . . . . .	\$59 25
Inspection . . . . .	54 57
Engineering expense . . . . .	1 10
Advertising . . . . .	13 15
Edgestone, 327 feet; 2 small, 1 large corner, 4 feet 8½ inches circles . . . . .	247 74
Flagging, 60 feet 2 inches . . . . .	40 92
Blocks, 2,800 . . . . .	56 00
Bricks, 250 . . . . .	3 00
Lumber, 1,038 feet . . . . .	27 99
Labor, building fence . . . . .	20 13

Amount paid William J. Rafferty & Co., under contract:

Removing trees, bushes, stumps, etc.,	\$10 00
23 cubic yards subgrading (earth excavation) @ 25c.	5 75
451 cubic yards filling furnished @ 50c.	225 50
327 linear feet straight edgestone hauled and set at 20c.	65 40
16 linear feet circular edgestone set @ 8c.,	1 28
85 linear feet existing edgestone reset @ 8c.	6 80
121 square yards granite block paving hauled and laid @ 65c.	78 65

*Carried forward* . . . . . \$393 38 \$523 85

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<i>Brought forward</i>		\$393 38	\$523 85
91 square yards existing granite block paving relaid @ 25c.		22 75	
10 square yards flagging crosswalks hauled and laid @ 25c.		2 50	
8 square yards existing flagging crosswalks relaid @ 25c.		2 00	
264 square yards macadam surface furnished and placed @ 79c.,		208 56	
49 square yards existing brick sidewalks re-laid @ 20c.		9 80	
1,571 square feet artificial stone sidewalks furnished and laid @ 15 $\frac{3}{8}$ c.		241 54	
5 covers reset @ \$3		15 00	
		<hr/>	
		895 53	
		<hr/>	
		\$1,419 38	

*Emmet street, from East Third street to East Second street.  
(Work not started.)*

Engineering		\$26 50
Advertising		20 33
		<hr/>
		\$46 83

*Evergreen street, from South Huntington avenue about 443 feet easterly. Excavated, constructed 6-inch macadam roadway, edgestones set, block gutters laid, flagging crosswalks laid and crushed stone sidewalks laid. Length, 456 feet. Area, 1,400 square yards.*

Engineering		\$21 75
Advertising		3 80
Engineering expense		60
Edgestone		54 35
Amount paid James H. McCarthy, under contract:		
216 cubic yards subgrading (earth excavation) @ 60c.		\$129 60
39 cubic yards subgrading (rock excavation) @ \$1.75		68 25
		<hr/>
<i>Carried forward</i>		\$197 85
		\$80 50

<i>Brought forward . . . . .</i>	\$197 85	\$80 50
767 linear feet straight edgestone hauled and set @ 20c. . . . .	153 40	
100 linear feet circular edgestone set @ 20c. . . . .	20 00	
109 linear feet existing edgestone reset @ 15c. . . . .	16 35	
307 square yards granite block paving fur- nished and laid @ \$1.95 . . . . .	598 65	
36 square yards existing granite block paving re-laid @ 30c. . . . .	10 80	
29 square yards flagging crosswalks hauled and laid @ \$1 . . . . .	29 00	
1,130 square yards macadam surface furnished and laid @ 65c. . . . .	734 50	
649 square yards crushed stone sidewalks fur- nished and laid @ 50c. . . . .	324 50	
8 covers reset @ \$3 . . . . .	24 00	
	<hr/>	
	\$2,109 05	
Less amount paid on contract in 1909 . . . . .	1,690 27	
	<hr/>	
	418 78	
	<hr/>	
	\$499 28	

*Farquhar street, from South street to Selwyn street. Length,  
718 feet. Area, 2,168 square yards. Constructed 6-inch  
macadam roadway, edgestones set, block gutters laid,  
flagging crosswalks laid and artificial stone sidewalks laid.*

Engineering . . . . .	\$49 25
Inspection . . . . .	215 75
Engineering expense . . . . .	.85
Advertising . . . . .	4 07
Edgestone, 1,293 feet 2 inches; 152 feet $2\frac{1}{2}$ inch circular and 6 small corners . . . . .	1,109 43
Flagging, 242 feet 11 inches. . . . .	165 17
	<hr/>
<i>Carried forward . . . . .</i>	\$1,544 52

<i>Brought forward . . . . .</i>	\$1,544 52
Amount paid Thomas F. Minton, under contract:	
Removal of trees, bushes, stumps, etc.,	\$5 00
978 cubic yards subgrading (earth excavation) @ 49c.	479 22
1,296 linear feet straight edgestone hauled and set @ 29c.	375 84
161 linear feet circular edgestone set @ 18c.,	28 98
21 linear feet existing edgestone reset @ 18c.	3 78
546 square yards granite block paving fur- nished and laid @ \$1.95 . . . . .	1,064 70
10 square yards existing granite block paving replaced @ 45c. . . . .	4 50
56 square yards flagging crosswalks hauled and laid @ 65c. . . . .	36 40
1,691 square yards macadam surface furnished and placed @ 59c. . . . .	997 69
9,410 square feet artificial stone sidewalks fur- nished and laid @ 13 $\frac{3}{4}$ c. . . . .	1,293 88
8 covers reset @ \$3 . . . . .	24 00
Extra work — Refill trench over old cul- vert:	
4 days' labor @ \$2 . . . . .	8 00
Plus 15 per cent on \$8 . . . . .	1 20
	— 4,323 19
	— \$5,867 71

*Fenwood road*, from Huntington avenue to Brookline avenue.  
(Work done in 1907.)

Balance due on contract of Bay State Contracting Company . . . . . \$150 00

*Fletcher street*, from Centre street to South street. (Work  
done in 1909.)

Advertising . . . . . \$7 20

*Geneva avenue*, from Columbia road to Bowdoin street. (Work not started.)

Engineering . . . . .	\$265 95
Advertising . . . . .	39 60
	<u><u>\$305 55</u></u>

*Granville street*, from Adams street to Milton street. (Work not started.)

Engineering . . . . .	\$66 75
Advertising . . . . .	12 31
	<u><u>\$79 06</u></u>

*Greenwich street*, corner Dorchester avenue. Widened. Brick sidewalks relaid and edgestone reset.

Labor . . . . .	\$99 75
Teaming . . . . .	51 50
Bricks, 7,795 . . . . .	93 54
Gravel, 12 double and 3 single loads . . . . .	26 33
	<u><u>\$271 12</u></u>

*Greenwood street*, from Harvard street to Elmo street. (Work not started.)

Engineering . . . . .	<u><u>\$237 11</u></u>
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*Grove street*, corner of Washington street. Widening. (Work not started.)

Engineering . . . . .	<u><u>\$1 75</u></u>
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*Hazleton street* (formerly Tileston avenue), from Blue Hill avenue for a distance of 562 feet. (Work not started.)

Engineering . . . . .	<u><u>\$90 25</u></u>
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*Howe street*, from Hancock street about 657 feet southwesterly. Length, 659 feet. Area, 1,900 square yards. Constructed 6-inch macadam roadway, edgestones set, block gutters laid, loam placed and artificial stone sidewalks laid.

Engineering . . . . .	\$126 10
Inspection . . . . .	114 75
Engineering expense . . . . .	1 90
Advertising . . . . .	10 74
Flagging, 42 feet 2 inches . . . . .	28 67
Edgestones, 1,280 feet 1 inch and 3 large corners . . . . .	833 01
Teaming . . . . .	5 00
Amount paid James Doherty, under contract:	
Preparing site . . . . .	\$5 00
Carried forward . . . . .	\$5 00 \$1,120 17

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<i>Brought forward</i>	\$5 00	\$1,120 17
767 cubic yards subgrading (earth excavation) @ 50c.	383 50	
18 cubic yards subgrading (rock excavation) @ \$1.75	31 50	
1,259 linear feet straight edgestone hauled and set @ 20c.	251 80	
15 linear feet circular edgestone set @ 20c.,	3 00	
42 linear feet existing edgestone reset @ 20c.	8 40	
448 square yards granite block paving furnished and laid @ \$1.80	806 40	
13 square yards existing granite block paving re-laid @ 45c.	5 85	
20 square yards existing flagging crosswalks re-laid @ 35c.	7 00	
1,465 square yards macadam surface furnished and placed @ 72c.	1,054 80	
19 square yards crushed stone sidewalks furnished and placed @ 59c.	11 21	
246 square yards loam spaces furnished, placed and seeded @ 35c.	86 10	
5,726 square feet artificial stone sidewalks furnished and laid @ 14½c.	824.54	
3 covers reset @ \$3	9 00	
	—	3,488 10
	—	<u>\$4,608 27</u>

*Interval street, from Blue Hill avenue to Normandy street.  
(Work not started.)*

Engineering	\$87 25
Advertising	16 31
	<u>\$103 56</u>

*Kempton street, from Huntington avenue to Fenwood road.*  
Length, 609 feet. Area, 2,145 square yards. Constructed  
6-inch macadam roadway, edgestone set, block gutters  
laid, flagging crosswalks laid and artificial stone sidewalks  
laid.

Engineering		\$116	87	
Inspection		81	00	
Engineering expense		1	80	
Advertising		10	74	
Flagging, 28 feet 10 inches		19	60	
Bricks, 1,500		18	00	
Amount paid J. C. Coleman & Sons Company, under contract:				
Preparing site		\$1	00	
478 cubic yards subgrading (earth excavation) @ 50c.		239	00	
345 linear feet straight edgestone furnished and set @ 95c.		327	75	
179 linear feet c i r c u l a r edgestone furnished and set @ \$1.40		250	60	
125 linear feet e x i s t i n g edgestone r e s e t @ 15c.		18	75	
387 square yards g r a n i t e block paving f u r- nished and laid @ \$2		774	00	
51 square yards existing granite block paving re-laid @ 50c.		25	50	
34 square yards existing flagging crosswalks re-laid @ 70c.		23	80	
1,674 square yards macadam surface furnished and placed @ 50c.		837	00	
40 square yards existing brick sidewalks re- laid @ 40c.		16	00	
4,288 square feet artificial stone sidewalks fur- nished and laid @ 15c.		643	20	
4 linear feet a r t i f i c i a l stone curbs furnished and laid @ 90c.		3	60	
<i>Carried forward</i>		\$3,160	20	
			\$248	01

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<i>Brought forward . . . . .</i>	\$3,160 20	\$248 01
Less 300 new sidewalk bricks furnished by the city @ \$12 M.,	3 60	
	—————	3,156 60
	—————	<u>\$3,404 61</u>

*Kingsdale street*, from Wales street about 250 feet easterly.  
Length, 295 feet. Area, 1,352 square yards. Constructed  
6-inch macadam roadway, edgestones set, block gutters  
laid, flagging crosswalks laid and artificial stone side-  
walks laid.

Engineering . . . . .	\$111 34
Inspection . . . . .	207 75
Engineering expense . . . . .	2 05
Advertising . . . . .	6 59
Edgestone, 574 feet 1 inch and circu- lar, 21 feet 1½ inches . . . . .	427 21
Blocks, 8,075 . . . . .	161 50
Flagging, 70 feet 1 inch . . . . .	47 66
Amount paid Joseph B. O'Rourke & Co., under contract:	
Removing trees, bushes, stumps, etc. . . . .	\$0 50
579 cubic yards subgrading (earth excavation) 50c. . . . .	289 50
581 linear feet straight edgestone hauled and set @ 20c. . . . .	116 20
21 linear feet circular edgestone set @ 20c. . . . .	4 20
19 linear feet existing edgestone reset @ 20c. . . . .	3 80
212 square yards granite block paving hauled and laid @ 75c. . . . .	159 00
7 square yards existing granite block paving relaid @ 75c. . . . .	5 25
15 square yards flagging crosswalks hauled and laid @ 75c. . . . .	11 25
1,118 square yards macadam surface furnished and placed @ 75c. . . . .	838 50
<i>Carried forward . . . . .</i>	\$1,428 20
	—————
	\$964 10

<i>Brought forward . . . . .</i>	\$1,428 20	\$964 10
4,342 square feet artificial stone sidewalks fur- nished and laid @ $14\frac{1}{2}c.$ . . . . .	629 59	
6 covers reset @ \$3 . . . . .	18 00	
	—————	2,075 79
	—————	<u>\$3,039 89</u>

*Leon street, from Ruggles street to Greenleaf street. Length, 891 feet. Area, 1,980 square yards. Constructed 6-inch macadam roadway, edgestones set, graded and filled, block gutters laid, flagging crosswalks laid, brick sidewalks laid and artificial stone sidewalks laid. (Work unfinished.)*

Engineering . . . . .	\$195 49
Inspection . . . . .	146 25
Engineering expense . . . . .	1 90
Advertising . . . . .	12 84
Flagging, 125 feet . . . . .	85 00
Blocks, 23,660 . . . . .	473 20
Bricks, 1,000 . . . . .	12 00

Amount paid James Doherty, under contract:

461 cubic yards subgrad- ing (earth excavations) @ 40c. . . . .	\$184 40
1,448 linear feet straight edgestone furnished and set @ 93c. . . . .	1,346 64
65 linear feet circular edgestone furnished and set @ \$1.26 . . . . .	81 90
338 linear feet existing edgestone reset @ 12c. . . . .	40 56
626 square yards granite block paving hauled and laid @ 63c. . . . .	394 38
94 square yards existing granite block pav- ing relaid @ 45c. . . . .	42 30
24 square yards flagging crosswalks hauled and laid @ 74c. . . . .	17 76
9 square yards existing crosswalks relaid @ 45c. . . . .	4 05
<i>Carried forward . . . . .</i>	<u>\$2,111 99</u>
	\$926 68

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<i>Brought forward . . . . .</i>	\$2,111 99	\$926 68
1,360 square yards macadam surface furnished and placed @ 73c. . . . .	992 80	
16 square yards brick side- walks laid @ 41c. . . . .	6 56	
34 square yards existing brick sidewalks re- laid @ 30c. . . . .	10 20	
7,400 square feet artificial stone sidewalks fur- nished and laid (un- finished) @ 3c. . . . .	222 00	
Extra work — Furnish filling where directed:		
154 cubic yards filling fur- nished @ 65c. . . . .	100 10	
Extra work — Build retaining wall at westerly corner of Greenleaf street:		
5 hours, edge stone setter, @ $62\frac{1}{2}$ c., \$3 13		
10 hours' labor @ 25c., 2 50	5 63	
Plus 15 per cent on \$5.63 . . . . .	84	
2 hours, double team, @ 75c. . . . .	1 50	
1 ton crushed stone @ \$1.50 . . . . .	1 50	
2 barrels sand @ 25c. . . . .	50	
1 barrel cement @ \$1.70,	1 70	
		\$3,455 32
Less $3\frac{1}{2}$ days' use of city horse roller @ \$1 . . . . .	3 50	
		\$3,451 82
Less 15 per cent re- tained . . . . .	517 77	
		2,934 05
		<u>\$3,860 73</u>

*Litchfield street, from Lincoln street to Western avenue. (Work  
not started.)*

Engineering . . . . .	\$26 25
Advertising . . . . .	98
	<u>\$27 23</u>

*Marbury terrace*, from Amory street northwesterly to railroad.  
 Length, 345 feet. Area, 997 square yards. Constructed  
 6-inch macadam roadway, edgestones set, block gutters  
 paved and artificial stone sidewalks laid.

Engineering . . . . .	\$6 00
Inspection . . . . .	64 25
Engineering expense . . . . .	90
Advertising . . . . .	4 62
Amount paid James Doherty, under contract:	
Removing trees, bushes, stumps, etc.,	\$12 00
471 cubic yards subgrading (earth excavation)	
@ 50c.	235 50
655 linear feet straight edgestone hauled and set @ 22c.	144 10
25 linear feet existing edgestone reset @ 13c.	3 25
235 square yards granite block paving fur- nished and laid @ \$1.83	430 05
12 square yards existing granite block paving relaid @ 45c.	5 40
12 square yards existing flagging crosswalks relaid @ 50c.	6 00
744 square yards macadam surface furnished and placed @ 78c.	580 32
4,348 square feet artificial stone sidewalks fur- nished and laid @ 13½c.	586 98
5 covers reset @ \$3	15 00
Extra work — Raise fence at railroad:	
2½ days, foreman, @ \$5 . . . \$12 50	
9½ days' labor @ \$2, 19 00	
	31 50
Plus 15 per cent on \$31.50 . . . . .	4 73
10 pounds nails @ 5c. . . . .	50
<i>Carried forward</i> . . . . .	\$2,055 33      \$75 77

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<i>Brought forward</i>	\$2,055 33	\$75 77
Less previous payments		
in 1909	781 06	
	1,274 27	
		<u>\$1,350 04</u>

*Maybrook street, from Glenway street to Greenwood street.  
(Work done in 1909.)*

Engineering	\$2 00
Amount due Daniel E. Lynch on con-	
tract	424 67
	<u>\$426 67</u>

*Mechanic street, from Ruggles street to Edgar street. Length, 169 feet. Area, 399 square yards. Constructed 6-inch macadam roadway, block gutters paved, flagging cross-walks laid and artificial stone sidewalks laid.*

Engineering	\$47 25
Inspection	55 31
Engineering expense	60
Advertising	13 16
Bricks, 250	3 00
Blocks, 6,255	125 10
Flagging, 30 feet	20 40
Edgestone, 280 feet 7 inches and 2 large corners	208 41
Labor, building fence	8 62
Amount paid William J. Rafferty & Co., under contract:	
Preparing site	\$25 00
123 cubic yards subgrading (earth excavation) @	
40c.	49 20
291 linear feet s t r a i g h t edgestone hauled and set @ 20c.	58 20
10 linear feet circular edgestone set @ 8c.,	80
54 linear feet existing edgestone reset @	
8c.	4 32
113 square yards granite block paving hauled and set @ 65c.	73 45
31 square yards existing block paving relaid @ 25c.	7 75
<i>Carried forward</i>	\$218 72
	\$481 85

<i>Brought forward . . . . .</i>	\$218 72	\$481 85
5 square yards flagging crosswalks hauled and laid @ 25c. . . . .	1 25	
8 square yards existing flagging crosswalks re-laid @ 25c. . . . .	2 00	
248 square yards macadam surface furnished and placed @ 79c. . . . .	195 92	
31 square yards existing brick sidewalks re- laid @ 20c. . . . .	6 20	
1,328 square feet artificial stone sidewalks fur- nished and laid @ 15 $\frac{3}{8}$ c. . . . .	204 18	
3 covers reset @ \$3 . . . . .	9 00	
	—————	637 27
	—————	<u>\$1,119 12</u>

*Meehan street, from Williams street to Keyes street. Length, 420 feet. Area, 663 square yards. Constructed 6-inch macadam roadway, edgestone set, block gutters paved, flagging crosswalks laid and brick sidewalks laid.*

Engineering . . . . .	\$57 21
Inspection . . . . .	36 00
Engineering expense . . . . .	1 45
Advertising . . . . .	4 49
Edgestone, 751 feet; 28 feet 4 inches, circles and 2 small corners . . . . .	584 50
Bricks, 9,000 . . . . .	105 76
Flagging, 153 feet . . . . .	104 04
	—————
	\$893 45
Less one large corner to stock . . . . .	6 00
	—————
	\$887 45

Amount paid James Doherty, under contract:

Removing trees, bushes, stumps, etc.,	\$5 00
350 cubic yards subgrading (earth excavation) @ 51c. . . . .	192 50
770 linear feet straight edgestone hauled and set @ 21c. . . . .	161 70
	—————
<i>Carried forward . . . . .</i>	\$359 20
	—————
	\$887 45

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<i>Brought forward . . .</i>	\$359 20	\$887 45
50 linear feet circular edgestone set @ 15c.,	7 50	
67 linear feet existing edgestone reset @ 15c. . . . .	10 05	
258 square yards granite block paving fur- nished and laid @ \$1.84 . . . .	474 72	
23 square yards existing granite block paving re-laid @ 45c. . . .	10 35	
32 square yards flagging crosswalks haulled and laid @ 80c. . . .	25 60	
483 square yards macadam surface furnished and placed @ 78c. . . .	376 74	
206 square yards brick sidewalks laid @ 43c. . . . .	88 58	
6 covers reset @ \$3 . . . .	18 00	
	<hr/>	\$1,370 74
Extra work — Cut sheathing where directed:		
1½ days' labor @ \$2 . . . .	2 33	
Plus 15 per cent on \$2.33 . . . . .	35	
	<hr/>	1,373 42
	<hr/>	<u>\$2,260 87</u>

*Melbourne street, from Centre street to the southeasterly line  
of Brent street extended. (Work done in 1909.)*

Amount retained under contract and paid to Thomas Croke & Co. . . .	\$240 21
Extra work—Remove tree:	
1 day, foreman . . . . \$4 00	
4 days' labor @ \$2 . . . . 8 00	
	<hr/>
Plus 15 per cent on \$12 . . . .	\$12 00
	<hr/>
	1 80
	<hr/>
	13 80
	<hr/>
	<u>\$254 01</u>

*Millet street, from Athelwold street to Harvard street. (Work  
done in 1909.)*

Advertising . . . . .	<u>\$8 27</u>
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*Montfern avenue, from Washington street to Faneuil street.  
(Work done in 1909.)*

Engineering . . . . . \$2 00

*Mora street, from Washington street to Milton avenue. Length, 1,259 feet. Area, 3,712 square yards. Constructed 6-inch macadam roadway, set edgestones, block gutters paved, flagging crosswalks laid, loam placed and artificial stone sidewalks laid.*

Engineering	.	.	.	.	.	\$152	64
Inspection	.	.	.	.	.	277	50
Engineering expense	.	.	.	.	.	3	75
Advertising	.	.	.	.	.	5	07
Edgestone, 2,485 feet 2 inches; 41 feet 6 inches circular and 4 small corners,						1,796	30
Flagging, 142 feet 1 inch	.	.	.	.	.	96	62
Amount paid Joseph B. O'Rourke & Co., under contract:							

Removing trees, bushes, stumps, etc.,	\$0 01
1,471 cubic yards subgrading (earth excavation) @ 45c.	661 95
101 cubic yards subgrading (rock excavation) @ \$1.75	176 75
2,492 linear feet straight edgestone hauled and set @ 22c.	548 24
55 linear feet circular edgestone set @ 15c.	8 25
45 linear feet existing edgestone reset @ 15c.	6 75
883 square yards granite block paving furnished and laid @ \$2	1,766 00
30 square yards flagging crosswalks hauled and laid @ 75c.	22 50
2,799 square yards macadam surface furnished and placed @ 70c.	1,959 30
<i>Carried forward</i>	\$5,149 75

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<i>Brought forward . . .</i>	\$5,149 75	\$2,331 88
475 square yards loam spaces furnished, placed and seeded @ 35c. . . . .	166 25	
10,309 square feet artificial stone sidewalks fur- nished and laid @ 14½c. . . . .	1,494 81	
21 covers reset @ \$3 . . . . .	63 00	
	—————	6,873 81
	—————	<u>\$9,205 69</u>

*Morton street, from Blue Hill avenue to beyond Leslie street.  
Widening.*

Engineering . . . . .	\$114 75
Advertising . . . . .	14 78
Teaming . . . . .	41 99
Labor, reset edgestone . . . . .	4 50
	—————
	<u>\$176 02</u>

*Newcastle road, from Faneuil street to Hobson street. (Work  
done in 1909.)*

Engineering . . . . .	<u>\$4 00</u>
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*Opera place, from Huntington avenue to St. Stephen street.  
(Work done in 1909.)*

Engineering . . . . .	\$2 00
Advertising . . . . .	4 42
	—————
	<u>\$6 42</u>

*Penhallow street, from Melville avenue to Mather street. Six-  
inch macadam roadway constructed, granite block gutters  
laid, flagging crosswalks laid, loam placed and artificial  
stone sidewalks laid. (Work started in 1909.)*

Engineering . . . . .	\$22 50
Inspection . . . . .	35 25
Engineering expense . . . . .	1 15
Edgestone, 7 feet 4 inches . . . . .	4 62
Crushed stone, 2 tons . . . . .	2 46
	—————
	\$65 98
Steam roller . . . . .	24 00
Amount paid Frank H. Cowin Com- pany, under contract: 33 cubic yards subgrad- ing (earth excava- tion) @ 60c. . . . .	\$19 80
	—————
<i>Carried forward . . . . .</i>	\$19 80
	\$89 98

<i>Brought forward . . . . .</i>	\$19 80	\$89 98
77 square yards loam furnished, placed and seeded @ 35c. . . . .	26 95	
Add 15 per cent on \$1,019.29 retained in 1909 . . . . .	152 89	
	<hr/>	
	\$199 64	
Less 2 days use of city steam roller @ \$12 . . . . .	24 00	
	<hr/>	
	175 64	
Amount paid James Doherty, under contract:		
1,192 square feet artificial stone sidewalks furnished and laid @ 15½c. . . . .	184 76	
	<hr/>	
	\$450 38	<hr/>

*Plainfield street, from Williams street to Keyes street. Length, 251 feet. Area, 558 square yards. Constructed 6-inch macadam roadway, edgestone set, block gutters laid, flagging crosswalks laid and artificial stone sidewalks laid.*

Engineering . . . . .	\$71 75
Inspection . . . . .	68 25
Engineering expense . . . . .	1 00
Advertising . . . . .	10 54
Flagging, 102 feet 1 inch . . . . .	69 42
Amount paid Thomas F. Minton, under contract:	
Removing trees, bushes, stumps, etc. . . . .	\$1 00
333 cubic yards subgrading (earth excavation) @ 45c. . . . .	149 85
493 linear feet straight edge-stone furnished and set @ 95c. . . . .	468 35
45 linear feet circular edge-stone furnished and set @ \$1.44 . . . . .	64 80
195 square yards granite block paving furnished and laid @ \$1.84 . . . . .	358 80
21 square yards flagging crosswalks hauled and laid @ 75c. . . . .	15 75
	<hr/>
<i>Carried forward . . . . .</i>	\$1,058 55
	\$220 96

<i>Brought forward</i>	. . .	\$1,058 55	\$220 96
366 square yards macadam			
surface furnished			
and placed @ 65c.	. .	237 90	
3 covers reset @ \$3	. .	9 00	
			1,305 45
Extra work — Omit brick side-walks and substitute artificial stone sidewalks:			
2,137 square feet artificial stone side-walks furnished and laid @ 15c.,		320 55	
			<u>\$1,846 96</u>

*Prescott street, from Frankfort street to the railroad. Length, 1,223 feet. Area, 4,620 square yards. Constructed 6-inch macadam roadway, edgestones set, block gutters laid, flagging crosswalks laid and brick sidewalks laid.*

Engineering	. . . . .	\$155 25
Inspection	. . . . .	166 50
Engineering expense	. . . . .	4 79
Advertising	. . . . .	3 80
Amount paid James Doherty, under contract:		
Removing trees, bushes, stumps, etc.	. . . . .	\$5 00
326 cubic yards subgrading (earth excavation) @ 50c.	. . . . .	163 00
2,500 cubic yards filling furnished @ 99c.	. . . . .	2,475 00
2,100 linear feet straight edge-stone furnished and set @ 95c.	. . . . .	1,995 00
188 linear feet circular edge-stone furnished and reset @ \$1.35	. . . . .	253 80
54 linear feet existing edge-stone reset @ 15c.	. . . . .	8 10
885 square yards granite block paving furnished and laid @ \$1.90	. . . . .	1,681 50
32 square yards existing granite block paving furnished and relaid @ 50c.	. . . . .	16 00
147 square yards flagging crosswalks furnished and laid @ \$4.30	. . . . .	632 10
<i>Carried forward</i>	. . . . .	<u>\$7,229 50</u>
		\$330 34

<i>Brought forward . . . .</i>	\$7,229 50	\$330 34
26 square yards existing flagging crosswalks laid @ 50c. . . .	13 00	
3,859 square yards macadam surface furnished and placed @ 79c. . . .	3,048 61	
1,789 square yards brick side- walks furnished and laid @ \$1.08 . . . .	1,932 12	
5 covers reset @ \$3 . . . .	15 00	
	<hr/>	
	\$12,238 23	
Less amount paid in 1909 . . . .	1,093 95	
	<hr/>	
	11,144 28	
	<hr/>	
	\$11,474 62	

*Public alley No. 425, from Dartmouth street to Exeter street,  
between Commonwealth avenue and Marlborough street.  
(Work not started.)*

Advertising . . . . .	\$6 54
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*Radcliffe street, from Harvard street to Faxon street. (Work  
done in 1909.)*

Crushed stone, 12.6 tons . . . . .	\$18 86
Teaming . . . . .	7 70

Amount paid Thomas Croke & Co.,  
under contract:

15 per cent retained in 1909 on \$4,716.50 . . . .	\$707 48
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Less furnished by the city:

44 $\frac{7}{8}$ linear feet flag- ging @ 68c., \$30 32
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4 $\frac{1}{2}$ days' labor @ \$2.25 . . . .	10 12
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12 $\frac{1}{2}$ tons crushed stone @ \$1.50, 18 75
--

2 days' steam roller @ \$13, 26 00
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1 day single team @ \$3.20 . . . .	3 20
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$\frac{1}{2}$ day single team @ \$3.50 . . . .	1 75
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1 day water cart @ \$4.50 . . . .	4 50
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94 64

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612 84

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\$639 40

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*Ralston street*, from Dorchester avenue to Boston street. (Work not finished.) Filling placed, pile bulkhead, fence and plank walk built.

Engineering . . . . .	\$245 55
Inspection . . . . .	122 50
Engineering expense . . . . .	1 80
Advertising . . . . .	11 65
Amount paid James Doherty, under contract:	
1,300 cubic yards filling furnished @ 40c. . . . .	\$520 00
182 linear feet pile bulkhead and fence furnished and built . . . . .	1,030 00
	1,550 00
Extra work—Furnish and build plank sidewalk as directed:	
Plank sidewalk furnished and built (as per agreement) . . . . .	55 00
	\$1,605 00
Less 5 per cent retained . . . . .	80 25
	1,524 75
	\$1,906 25

*Rexford street*, from Blue Hill avenue to Oakland street. Length, 1,013 feet. Area, 2,926 square yards. Constructed 6-inch macadam roadway, edgestones set, block gutters paved, flagging crosswalks laid, loam placed and artificial stone sidewalks laid.

Engineering . . . . .	\$71 86
Inspection . . . . .	78 75
Engineering expense . . . . .	5 65
Flagging, 5 feet . . . . .	3 40
Teaming . . . . .	2 50
Amount paid James H. Ferguson, under contract:	
130 linear feet existing edgestone reset @ 15c. . . . .	\$19 50
56 square yards existing granite block paving relaid @ 50c. . . . .	28 00
1 square yard flagging crosswalks furnished and laid @ \$4.50 . . . . .	4 50
<i>Carried forward</i> . . . . .	\$52 00
	\$162 16

<i>Brought forward . . . .</i>		\$52 00	\$162 16
18 square yards macadam surface furnished and placed @ 82c.,		14 76	
418 square yards loam spaces furnished, placed and seeded @ 25c. . . .		104 50	
		—	171 26
Extra work—Furnish cutter:	stone-		
1½ days, stonecutter, @ \$4.50 . . . .		\$7 88	
Plus 15 per cent on \$7.88 . . . .		1 18	
		—	9 06
Plus 15 per cent on \$7,048.87, retained in 1909 . . . .		\$1,057 33	
Less furnished by the city, 2 small corners @ \$3.60 . . . .		\$7 20	
Less furnished by the city, 4 feet flagging @ 68c. . . .		2 72	
Less furnished by the city, ½ double team @ \$5 . . . .		2 50	
		—	12 42
		—	1,044 91
Amount paid Warren Brothers Com- pany, under contract:			
9,002 square feet artificial stone sidewalks fur- nished and laid @ 13½c. . . .		\$1,192 77	
Extra work—Remove surplus material where directed:			
15¾ days' labor @ \$2.25 . . . .		35 44	
Plus 15 per cent on \$35.44 . . . .		5 32	
2½ days, double team, @ \$6 . . . .		15 75	
		—	—
<i>Carried forward . . . .</i>		\$1,249 28	\$1,387 39

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<i>Brought forward . . . . .</i>	\$1,249 28	\$1,387 39
Extra work—Furnish and lay extra con- crete under side- walks where directed:		
316 square feet extra con- crete furnished and laid @ 5c. . . . .	15 80	
	—	1,265 08
	—	<u>\$2,652 47</u>

*Rochdale street, from Cobden street to Fenner street (north-easterly from Cobden street). Length, 180 feet. Area, 424 square yards. Constructed 6-inch macadam roadway, edgestones set, block gutters laid, flagging crosswalks laid, brick sidewalks laid and artificial stone sidewalks laid.*  
Work done by the city.

Engineering . . . . .	\$68 81
Inspection . . . . .	21 75
Engineering expense . . . . .	1 00
Advertising . . . . .	12 04
Crushed stone, 123.9 tons . . . . .	151 16
Edgestone, 404 feet straight, 35 feet 6 inches circles . . . . .	324 85
Blocks, 4,860 . . . . .	97 20
Gravel, 5½ single and 22 double loads . . . . .	39 60
Flagging, 20 feet 5 inches . . . . .	13 88
Filling, 32 double loads . . . . .	25 60
Steam roller . . . . .	32 50
Teaming . . . . .	114 78
Water cart . . . . .	7 35
Edgestone excavating . . . . .	97 50
Edgestone setting . . . . .	74 25
Gutter excavating . . . . .	30 12
Gutter paving . . . . .	49 50
Sidewalk excavating for brick . . . . .	2 56
Sidewalk paving for brick . . . . .	3 75
Crosswalks excavating . . . . .	15 07
Crosswalks laying . . . . .	45 00
Macadam subgrading . . . . .	79 50
Macadam spreading . . . . .	104 00
Artificial stone sidewalk excavation . . . . .	57 75
Amount paid Jeremiah J. Sullivan, under contract:	
2,680 square feet artificial stone side- walks furnished and laid @ 18c. . . . .	482 40
	—
	<u>\$1,951 92</u>

*Rosemont street, from Gustine street to Train street. Length, 433 feet. Area, 1,251 square yards. Constructed 6-inch macadam roadway, edgestones set, block gutters laid, flagging crosswalks laid and artificial stone sidewalks laid.*

Engineering	.	.	.	\$122 13
Inspection	.	.	.	105 75
Engineering expense	.	.	.	1 55
Advertising	.	.	.	10 54
Flagging, 156 feet 7 inches	.	.	.	106 47
Amount paid William J. Rafferty & Co., under contract:				
Removing trees, bushes, stumps, etc.	.	.	\$1 00	
550 cubic yards subgrading (earth excavation)	.	.		
@ 41c.	.	.	225 50	
1 cubic yard subgrading (rock excavation) @	\$1.75	.		1 75
679 linear feet straight edgestone furnished and set @ 95c.	.	.	645 05	
32 linear feet circular edgestone furnished and set @ \$1.29	.	.	41 28	
96 linear feet existing edgestone reset @	15c.	.		14 40
262 square yards granite block paving fur- nished and laid @	\$1.82	.		476 84
63 square yards existing block paving relaid @ 25c.	.	.	15 75	
35 square yards flagging crosswalks hauled and laid @ 90c.	.	.	31 50	
12 square yards existing flagging crosswalks relaid @ 50c.	.	.	6 00	
995 square yards macadam surface furnished and placed @ 73c.	.	.	726 35	
4,537 square feet artificial stone sidewalks fur- nished and laid @	15 $\frac{1}{4}$ c.	.	691 89	
<i>Carried forward</i>	.	.	\$2,877 31	\$346 44

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<i>Brought forward . . .</i>	\$2,877 31	\$346 44
6 covers reset @ \$3 . . .	18 00	
	<hr/>	
		\$2,895 31

**Extra work — Build underdrains to connect the cinder foundation of the artificial stone sidewalks with the catch-basin where directed:**

1 $\frac{3}{4}$ days' labor @ \$2.	3	50
Plus 15 per cent on		
\$3.50		53
14 linear feet drain pipe		
@ 14c.		98
$\frac{1}{4}$ ton crushed stone @		
\$1.50		38

98

38

2,900 70

\$3,247 14

*Sudan street, from Dorchester avenue to Sagamore street.*  
Length, 716 feet. Area, 2,070 square yards. Constructed  
6-inch macadam roadway, edgestone set, block gutters laid,  
flagging crosswalks laid and artificial stone sidewalks laid.

Engineering	.	.	.	.	.	\$81	75
Inspection	.	.	.	.	.	111	75
Engineering expense	.	.	.	.	.	2	10
Advertising	.	.	.	.	.	6	59
Flagging, 111 feet	.	.	.	.	.	75	48
Edgestone, 1,305 feet straight and 21 feet $1\frac{1}{2}$ inches circles	.	.	.	.	.	938	95

Amount paid J. C. Coleman & Sons  
Company, under contract:

Removing trees, bushes, stumps, etc. . . . .	\$1 00
1,133 cubic yards subgrading (earth excavation) @ 49c. . . . .	555 17
1,304 linear feet straight edgestone hauled and set @ 25c. . . . .	326 00
22 linear feet circular edgestone set @ 25c.,	5 50
83 linear feet existing edgestone reset @ 15c. . . . .	12 45

*Carried forward . . . . \$900 12 \$1,216 62*

<i>Brought forward . . .</i>	\$900 12	\$1,216 62
484 square yards granite block paving fur- nished and laid @ \$1.85 . . .	895 40	
21 square yards existing granite block paving re-laid @ 49c. . .	10 29	
23 square yards flagging crosswalks hauled and laid @ \$1 . . .	23 00	
12 square yards existing flagging crosswalks re-laid @ 75c. . .	9 00	
1,566 square yards macadam surface furnished and placed @ 59c. . .	923 94	
8,593 square feet artificial stone sidewalks fur- nished and laid @ 14½c. . .	1,245 99	
6 covers reset @ \$3 . . .	18 00	
	4,025 74	
		<u>\$5,242 36</u>

Taft street (including Cameron street and Pleasant terrace), from Dorchester avenue to Pleasant street. Length, 643 feet. Area, 1,858 square yards. Constructed 6-inch macadam roadway, edgestone set, block gutters laid, flagging crosswalks laid and artificial stone sidewalks laid.

Engineering . . . . .	\$118 99
Inspection . . . . .	90 00
Engineering expense . . . . .	1 30
Advertising . . . . .	10 64
Flagging, 50 feet . . . . .	34 00
Edgestone, 260 feet 4 inches straight and 334 feet 4 inches circles . . . . .	583 44

Amount paid James Doherty, under contract:

Removing trees, bushes, stumps, etc. . . . .	\$5 00
628 cubic yards subgrading (earth excavation) @ 50c. . . . .	314 00
266 linear feet straight edgestone hauled and set @ 18c. . . . .	47 88

*Carried forward . . . . .* \$365 88 \$838 37

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<i>Brought forward . . .</i>	\$365 88	\$838 37
335 linear feet circular edgestone set @ 12c.,	40 20	
26 linear feet existing edgestone reset @ 12c. . . . .	3 12	
422 square yards g r a n i t e block paving f u r - nished and laid @ \$1.75 . . . . .	738 50	
101 square yards existing granite block paving reläuft @ 45c. . . . .	45 45	
11 square yards flagging crosswalks h a u l e d and laid @ 97c. . . . .	10 67	
11 square yards existing flagging crosswalks reläuft @ 33c. . . . .	3 63	
1,400 square yards macadam surface furnished and placed @ 72c. . . . .	1,008 00	
1,412 square feet artificial stone sidewalks fur- nished and laid @ $14\frac{3}{4}$ c. . . . .	208 27	
6 covers reset @ \$3 . . . . .	18 00	
		\$2,442 72
Extra work — Excavate below subgrade where directed:		
6 hours' labor @ 25c. . . . .	1 50	
Plus 15 per cent on \$1.50 . . . . .	23	
Extra work — Point with Portland cement mortar the joints of the existing edge- stone where the same is not reset:		
18 hours' labor @ 25c. . . . .	4 50	
Plus 15 per cent on \$4.50 . . . . .	68	
2 barrels Portland cement @ \$1.70 . . . . .	3 40	
20 cubic feet sand @ 5c. . . . .	1 00	
		2,454 03
		<u>\$3,292 40</u>

*Wales street*, from Harvard street to Talbot avenue. (Work not started.)

Engineering . . . . .	\$110 75
Advertising . . . . .	10 78
	<u><u>\$121 53</u></u>

*Welles avenue*, from Dorchester avenue to Argyle street. Length, 723 feet. Area, 3,213 square yards. Constructed 6-inch macadam roadway, edgestones set, block gutters laid, flagging crosswalks laid, loam placed and artificial stone sidewalks laid.

Engineering . . . . .	\$173 74
Inspection . . . . .	191 76
Engineering expense . . . . .	2 85
Advertising . . . . .	4 00
Flagging, 329 feet 5 inches . . . . .	224 00
Amount paid William J. Rafferty & Co., under contract:	
Removing trees, bushes, stumps, etc. . . . .	\$1 00
1,095 cubic yards subgrading (earth excavation) @ 45c. . . . .	492 75
786 linear feet straight edgestone furnished and set @ 95c. . . . .	746 70
180 linear feet circular edgestone furnished and set @ \$1.26 . . . . .	226 80
508 linear feet existing edge-stone reset @ 12c. . . . .	60 96
534 square yards granite block paving furnished and laid @ \$1.82 . . . . .	971 88
60 square yards existing granite block paving relaid @ 40c. . . . .	24 00
68 square yards flagging crosswalks haulled and laid @ 90c. . . . .	61 20
28 square yards existing flagging crosswalks relaid @ 50c. . . . .	14 00
2,784 square yards macadam surface furnished and placed @ 72c. . . . .	2,004 48
2 covers reset @ \$3 . . . . .	6 00
<i>Carried forward</i> . . . . .	<u><u>\$4,609 77</u></u> \$596 35

<i>Brought forward . . . . .</i>	\$4,609 77	\$596 35
Extra work — Omit brick sidewalks and substitute artificial stone sidewalks with loam spaces:		
8,010 square feet artificial stone sidewalks fur- nished and laid @ 15c. . . . .	1,201 50	
457 square yards loam spaces furnished and placed @ 50c. . . . .	228 50	
Extra work—Cut down approaches to railroad crossing:		
21 hours, foreman, @ 62½c. . . . \$13 13		
114 hours' labor @ 25c. . . . 28 50	41 63	
Plus 15 per cent on \$41.63 . . . .	6 24	
11 hours, steam roller, @ \$1.62½ . . . .	17 88	
2 hours, water cart, @ 75c. . . . .	1 50	
23½ tons crushed stone @ \$1.50 . . . . .	35 33	
	6,142 35	
		<u>\$6,738 70</u>

Wentworth street, from Norfolk street to Dunbar avenue.

Length, 858 feet. Area, 2,479 square yards. Constructed 6-inch macadam roadway, edgestone set, block gutters laid, flagging crosswalks laid and artificial stone sidewalks laid.

Engineering . . . . .	\$119 75
Inspection . . . . .	111 25
Engineering expense . . . . .	2 00
Advertising . . . . .	11 35
Edgestone, 1,620 feet 11 inches straight; 6 small corners, 57 feet 4½ inches circles . . . . .	1,127 44
Flagging . . . . .	110 67

Amount paid Joseph B. O'Rourke & Co.,  
under contract:

Removing trees, bushes, stumps, etc.,	\$25 00
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<i>Carried forward . . . . .</i>	\$25 00	\$1,482 46
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<i>Brought forward . . . . .</i>	\$25 00	\$1,482 46
630 cubic yards subgrading (earth excavation) @ 45c. . . . .	283 50	
1,589 linear feet straight edgestone hauled and set @ 22c. . . . .	349 58	
78 linear feet circular edgestone set @ 15c., . . . . .	11 70	
148 linear feet existing edgestone reset @ 15c. . . . .	22 20	
593 square yards granite block paving furnished and laid @ \$2 . . . . .	1,186 00	
50 square yards existing block paving relaid @ 50c. . . . .	25 00	
42 square yards flagging crosswalks hauled and laid @ 75c. . . . .	31 50	
11 square yards existing flagging crosswalks relaid @ 75c. . . . .	8 25	
1,892 square yards macadam surface furnished and placed @ 70c. . . . .	1,324 40	
10,428 square feet artificial stone sidewalks furnished and laid @ 14½c. . . . .	1,512 06	
14 covers reset @ \$3 . . . . .	42 00	
	—	4,821 19
	—	<u>\$6,303 65</u>

*Westcott street, from Talbot avenue to West Park street. (Work not started.)*

Engineering . . . . .	\$98 35
Advertising . . . . .	15 08
	—
	<u>\$113 43</u>

*West Park street, from Bernard street to railroad. (Work not started.)*

Engineering . . . . .	\$82 10
Advertising . . . . .	15 08
	—
	<u>\$97 18</u>

*Whitman street, from Norfolk street to Dunbar avenue. Length, 808 feet. Area, 2,334 square yards. Constructed 6-inch macadam roadway, edgestone set, block gutters laid, flagging crosswalks laid and artificial stone sidewalks laid.*

Engineering . . . . .	\$109 53
Inspection . . . . .	150 50
Engineering expense . . . . .	1 60
Advertising . . . . .	11 35
Edgestone, 1,554 feet 11 inches straight, 4 small corners and 38 feet 4 inches circles . . . . .	1,050 03
Flagging, 93 feet 8 inches . . . . .	63 69
Removing trees, bushes, stumps, etc.,	\$0 01
1,074 cubic yards subgrad- ing (earth excavation) @ 45c. . . . .	483 30
15 cubic yards subgrad- ing (rock excavation) @ \$1.75 . . . . .	26 25
1,583 linear feet straight edgestone hauled and set @ 22c. . . . .	348 26
52 linear feet circular edgestone set @ 15c. . . . .	7 80
22 linear feet existing edgestone reset @ 15c. . . . .	3 30
562 square yards granite block paving fur- nished and laid @ \$2 . . . . .	1,124 00
2 square yards existing granite block paving relaid @ 50c. . . . .	1 00
23 square yards flagging crosswalks hauled and laid @ 75c. . . . .	17 25
1,765 square yards mac- adam surface fur- nished and placed @ 70c. . . . .	1,235 50
10,248 square feet artificial stone sidewalks fur- nished and laid @ 14½c. . . . .	1,485 96
10 covers reset @ \$3 . . . . .	30 00
	4,762 63
	<u>\$6,149 33</u>

## RECAPITULATION OF STREET WORK.

<i>A street, West First street to Mt. Washington avenue</i>	\$3,983 15
<i>A street, Athens to West Fourth street</i>	1,007 63
<i>Adams street, Dorchester avenue to Bowdoin street</i>	1,939 10
<i>Adams street, Minot to Codman street</i>	1,036 84
<i>Adams street, Parkman to Ashmont street</i>	181 45
<i>Albany street, Broadway to Dover street</i>	3,209 14
<i>Alford street, Main street to Malden Bridge</i>	3,727 25
<i>Almont street, Walk Hill street to Blue Hill avenue,</i>	1,399 61
<i>Amory street, Centre to Green street</i>	7,588 31
<i>Angell street, Blue Hill avenue to Canterbury street</i>	825 61
<i>Ashmont street, Dorchester avenue to Washington street</i>	963 65
<i>Athens street, A street to railroad bridge</i>	926 60
<i>Auckland street, Savin Hill avenue to Bay street</i>	7 50
<i>B street, West Broadway to West Second street,</i>	919 00
<i>Baker street, Vermont street to Newton line</i>	3,103 64
<i>Batchelder street, Marshfield to Burrell street</i>	240 54
<i>Baxter street, C to D street</i>	484 06
<i>Bay State road, Beacon to Chilmark street</i>	1,879 22
<i>Beacon street, Brookline avenue to Raleigh street,</i>	368 08
<i>Beacon street, Boston &amp; Albany Bridge to St. Mary's street</i>	1,390 64
<i>Beacon street, Dartmouth to Hereford street</i>	37 25
<i>Beacon street, Raleigh to Deerfield street</i>	237 33
<i>Bennington street (at Church, corner of Moore street)</i>	923 65
<i>Bennington street, Central square to Prescott street</i>	8,761 60
<i>Bennington street, Neptune to Orleans street</i>	16 37
<i>Bennington street, Wordsworth to Saratoga street,</i>	724 64
<i>Bennington street, Saratoga street to Boston, Revere Beach &amp; Lynn Railroad</i>	2,525 39
<i>Blackwood street (wall)</i>	1,288 96
<i>Blaine street, Braintree street to 300 feet south,</i>	224 18
<i>Blue Hill avenue, Georgia to Seaver street</i>	2,079 36
<i>Bolton street, D to E street</i>	397 01
<i>Bowdoin avenue, No. 61 to No. 73</i>	126 84
<i>Boylston street, Washington to Lamartine street,</i>	1,661 72
<i>Bremen street, Maverick to Bennington street</i>	4,014 48
<i>Brent street, Washington to Wainwright street</i>	1,128 61
<i>Carried forward</i>	\$59,328 41

STREET DEPARTMENT — HIGHWAY DIVISION. 187

<i>Brought forward</i>		\$59,328	41
<i>Bromley street</i> , Heath street to Bromley park		436	42
<i>Burney street</i> , Tremont street to Delle avenue		491	90
<i>Burrell street</i>		107	29
<i>C street</i> , West Seventh to Baxter street		289	67
<i>Call street</i> , Gordon to Hall street		2,352	80
<i>Cambridge street</i> , Allston Bridge over Boston & Albany Railroad to Charles River Basin		3,318	21
<i>Cambridge street</i> , Washington to North Beacon street		11,409	24
<i>Canterbury street</i> , Mt. Hope street, 1,300 feet towards Paine street		879	00
<i>Castle street</i> , Tremont to Washington street		2,031	44
<i>Causeway street</i> , Leverett to west side of Lowell street		1,002	73
<i>Centre street</i> , Ballard to Orchard street		582	22
<i>Centre street</i> , Grove street to Dedham line		762	89
<i>Centre street</i> , La Grange street to Mt. Vernon		343	90
<i>Centre street</i> , Parker to Day street		547	12
<i>Chadwick street</i> , Yeoman to Hampden street		975	14
<i>Charles street</i> , Boylston to Beacon street		22,621	03
<i>Charles street</i> , Cambridge to Fruit street		316	67
<i>Chelsea street</i> , Eagle square to bridge		12	12
<i>Chelsea street</i> , Bunker Hill to Medford street		2,520	77
<i>Cleveland circle</i> , Brighton		2,735	30
<i>Clifton street</i> , Dudley to Shirley street		1,962	81
<i>Codman street</i> , Dorchester avenue to Adams street,		2,052	52
<i>Corbet street</i> , Norfolk to Selden street		9,066	24
<i>Cordis street</i> , Warren to High street		499	11
<i>Corey street</i> , Moulton to Medford street		475	03
<i>Corey street</i> , Weld street to railroad station		1,988	58
<i>Cornell street</i> , Kittredge to Poplar street		732	51
<i>Cottage street</i> , Sumner to Maverick street		505	60
<i>Cushing avenue</i> , Sawyer avenue to Columbia road,		64	80
<i>Dalton street</i> , Falmouth to Scotia street		766	50
<i>Davenport street</i> , Tremont street to Columbus avenue		396	65
<i>Decatur street</i> , Bunker Hill to Medford street		1,256	23
<i>Delle avenue</i> , Parker to Burney street		558	85
<i>Devonshire street</i> , State to Water street		7	15
<i>Dexter street</i> , Dorchester avenue to Ellery street,		340	08
<i>Doane street</i> , Broad street to 130 feet west		632	19
<i>Dorchester avenue</i> , Mt. Washington avenue towards drawbridge		1,894	22
<i>Dorchester avenue</i> , Savin Hill avenue to Leonard street		618	14
<i>Dorchester avenue</i> , Dracut to Wrentham street (east side)		934	60
<i>Carried forward</i>		\$137,816	08

<i>Brought forward</i>		\$137,816 08
<i>Downing street</i> , Vernon to Whittier street		5 00
<i>Dudley street</i> , Harrison avenue to Magazine street,	20,985	75
<i>Dunmore street</i> , Magazine to Dudley street		35 60
<i>Dunstable street</i> , Main street to Rutherford avenue		2,589 58
<i>Durham street</i> , St. Botolph street to railroad		425 05
<i>Dustin street</i> , Cambridge to North Beacon street,		656 48
<i>E street</i> , First to Bolton street		5 00
<i>East Broadway</i> , H to L street		1,617 18
<i>East Brookline street</i> , Washington street to Harrison avenue		31 05
<i>East Cottage street</i> , Dorchester avenue to Columbia road		2,214 46
<i>East Eighth street</i> , M street to Columbia road		116 25
<i>East First street</i> , P street to Farragut road		407 51
<i>East First street</i> , at Farragut road (bulkhead)		2,204 79
<i>East Fourth street</i> , H to I street		803 82
<i>East Seventh street</i> , N to O street		1,010 47
<i>East Third street</i> , P street to Farragut road		1,570 56
<i>Eastman street</i> , Columbia road to Elder street		1,061 20
<i>Elm Hill avenue</i> , Ruthven to Homestead street		2,600 13
<i>Elm Hill Park</i> , from Warren street		1,138 34
<i>Elmira street</i> , Market to Murdock street		628 63
<i>Elmo street</i> , Blue Hill avenue to Erie street		1,682 19
<i>Emerson street</i> , K to L street		554 60
<i>Endicott street</i> , Cross to Stillman street		433 74
<i>Endicott street</i> , Cooper to Stillman street		432 40
<i>Englewood avenue</i> , Chestnut Hill avenue to Brookline line		1,183 82
<i>Erie street</i> , Washington to McLellan street		2,314 38
<i>Etna street</i> , North Beacon to Elmira street		2,688 25
<i>Everett street</i> , Braintree street, 450 feet south		297 07
<i>Exeter street</i> , Boylston street to Huntington avenue		381 26
<i>Fairbanks street</i> , Washington to Faneuil street		20 62
<i>Falmouth street</i> , Norway to Belvidere street		699 33
<i>Falmouth street</i> , Massachusetts avenue to Norway street		5 25
<i>Faneuil Hall square</i>		800 00
<i>Farragut road</i> , East Fourth to East Sixth street		1,405 78
<i>Farrington avenue</i> , Harvard avenue to Linden street		602 12
<i>Florence street</i> , Brook to Blakemore street		723 20
<i>Florence street</i> , retaining wall		1,256 23
<i>Forbes street</i> , Centre street to Chestnut avenue		3,548 01
<i>Forest Hills street</i> , Glen road to Williams street		1,070 34
<i>Foster street</i> , Washington street to Commonwealth avenue		3,367 79
<i>Carried forward</i>		\$201,389 31

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<i>Brought forward</i>		\$201,389	31
<i>Freeport street</i> , Park street to Bridge		2,865	38
<i>Freeport street Wall</i> , at Commercial Point Bridge,		1,694	25
<i>Gardner street</i> , Spring to Morrison street		1,860	61
<i>Geneva avenue</i> , Bowdoin to Park street		959	09
<i>George street</i> , Shirley to Magazine street		752	79
<i>Gerard street</i> , Kemble street to Norfolk avenue		1,242	28
<i>Gibson street</i> , Dorchester avenue to Adams street,		823	17
<i>Glenway street</i> , west side near Harvard street		323	17
<i>Gloucester street</i> , Boylston to Beacon street		48	13
<i>Goldsmith street</i> , Centre to Custer street		369	28
<i>Grampian way</i>		165	25
<i>Gore street</i> , Parker to Terrace street		311	32
<i>Granite avenue</i> , Adams square to Bridge		1,341	14
<i>Hale street</i> , South Margin street to 160 feet west		435	42
<i>Halleck street</i> , Ruggles to Station street		2,456	49
<i>Hamilton street</i> , Bowdoin street to Homes avenue,		898	87
<i>Hammond street</i> , Shawmut avenue to Warwick street		289	12
<i>Hampshire street</i> , Linden Park to Ruggles street		5	00
<i>Hancock street</i> , Columbia road to Winter street		16,467	65
<i>Harrison avenue</i> , Union Park and Waltham street (around park)		454	11
<i>Harvard street</i> , Washington street to Harrison avenue		3,499	51
<i>Harvard street</i> , Washington street to Blue Hill avenue		4,566	14
<i>Harwich street</i> , Dartmouth to Yarmouth street		258	95
<i>Haskins street</i> , Ruggles to Vernon street		532	04
<i>Hastings street</i> , Centre to Montview street		811	45
<i>Hawkins street</i> , Sudbury to Chardon street		1,055	65
<i>Heath street</i> , Bromley to Parker street		326	43
<i>Heath street</i> , Parker street to South Huntington avenue		37,604	68
<i>Hemenway street</i> , Bryant street to Westland avenue		3,194	46
<i>Henshaw street</i> , Market to Menlo street		190	35
<i>Herman street</i> , Regent to Circuit street		302	46
<i>Highland street</i> , Hawthorne to Norfolk street		3,479	68
<i>Hobart street</i> , Faneuil to Brooks street		20	00
<i>Houghton street</i> , Mill to Pope's Hill street		1,326	11
<i>Kenrick street</i> , Lake street to Newton line		1,289	16
<i>Keyes street</i> , South to Washington street		1,227	00
<i>Kingston street</i> , Beach to Essex street		3,615	80
<i>La Grange street</i> , Shaw to Linnett street		993	24
<i>Linden street</i> , Farrington avenue to Cambridge street		501	36
<i>Linden Park street</i> , Tremont to Cabot street		6	00
<i>Linden Park street</i> , Cabot to Roxbury street		384	77
<i>Carried forward</i>		\$300,337	07

<i>Brought forward</i>		\$300,337	07
<i>London street</i> , Sumner to Meridian street		1,561	58
<i>Longwood avenue</i> , Brookline to Huntington avenue		16,533	12
<i>Magazine street</i> , George street to Norfolk avenue		468	75
<i>Main street</i> , Mead street to Furbush court		2,018	14
<i>Marion street</i> , Bunker Hill to Princeton street		412	10
<i>Massachusetts avenue</i> , Albany to Southampton street		221	73
<i>Massachusetts avenue</i> , Southampton street to railroad bridge		652	99
<i>Massachusetts avenue</i> , Albany to Washington street (north side)		1,351	00
<i>Massachusetts avenue</i> , Columbus avenue to Washington street		10,446	94
<i>McLellan street</i> , Blue Hill avenue to Bradshaw street		1,461	75
<i>Mechanic street</i> , Ruggles street to Mechanic court		342	77
<i>Medfield street</i> , Audubon road to St. Mary's street		324	76
<i>Meridian street</i> , Maverick to Central square		1,574	89
<i>Merchants row</i> , State toward South Market street		551	33
<i>Merrill street</i> , Erie to Glenarm street		308	25
<i>Milk street</i> , Pearl to Batterymarch street		5,403	51
<i>Millmont street</i> , Lambert avenue to Highland street		683	02
<i>Montview street</i> , Corey to Mt. Vernon street		818	66
<i>Monument square</i> , around Bunker Hill Monument Grounds		5,015	89
<i>Moore street</i> , at church. (See Bennington street.)			
<i>Morton street</i> , Blue Hill avenue to Harvard street		22	50
<i>Morton street</i> , Blue Hill avenue to Harvard street, Mt. Vernon street, Academy Hill road to Foster street		1,035	46
<i>Munroe street</i> , Harold street to Humboldt avenue		556	94
<i>Newbury street</i> , Clarendon to Dartmouth street		797	93
<i>Nixon street</i> , Centre to Mather street		663	72
<i>Norfolk street</i> , Highland street to Lambert avenue		51	25
<i>Norfolk street</i> , Walk Hill street to Blue Hill avenue		346	90
<i>Norfolk street</i> , Withington to Wentworth street		3,404	47
<i>Northampton street</i> , Tremont street to Columbus avenue		1,373	77
<i>North Harvard street</i> , Western avenue to the river		26	77
<i>North Market street</i> , Merchants row to Commercial street		2,192	87
<i>Norway street</i> , St. Paul to Falmouth street		10,441	76
<i>Norway street</i> , Huntington avenue to Falmouth street		1	25
<i>Norway street</i> , St. Paul street to Massachusetts avenue		278	97
<i>Oakland street</i> , Washington to Faneuil street		308	62
		429	51
<i>Carried forward</i>		\$372,420	94

## STREET DEPARTMENT — HIGHWAY DIVISION. 191

<i>Brought forward</i>		\$372,420	94
<i>Oliver street</i> , Milk street to 200 feet southeasterly,		2,188	34
<i>Otisfield street</i>		259	00
<i>Park street</i> , at Beacon street		364	00
<i>Park street</i> , Centre to Montview street		946	93
<i>Parker street</i> , Tremont street to Fisher avenue		1,708	96
<i>Parkman street</i> , North Russell to Blossom street		1,622	18
<i>Pearl street</i> , Milk street to 148 feet south		1,906	30
<i>Pleasant street</i> , Stoughton to East Cottage street		1,226	05
<i>Pleasant street</i> , Stoughton to Hancock street		108	00
<i>Pond street</i> , Eliot to Prince street		386	36
<i>Pope street</i> , Swift to Curtis street		1,565	39
<i>Prince street</i> , Salem to Causeway street		2,292	75
<i>Quincy street</i> , Bowdoin street to Columbia road		1,405	86
<i>Quincy street</i> , Blue Hill avenue to Columbia road,		3,950	53
<i>Reed street</i> , Northampton to Hunneman street		1,333	59
<i>Richfield street</i> , Columbia road to Olney street		307	47
<i>Ridgeway lane</i> , Cambridge to Derne street		623	07
<i>River street</i> , Washington street to Central avenue,		1,619	37
<i>Robert street</i> , South to South Walter street		490	64
<i>Rollins street</i> , Harrison avenue to Washington street		274	62
<i>Rossmore road</i> , Washington to Forest Hills street,		1,888	53
<i>Round Hill street</i> , Walden to Gay Head street		2,782	74
<i>Rowena street</i> , Carruth to Bushnell street		3,131	74
<i>Ruggles street</i> , Tremont to Cabot street		6	00
<i>Ruggles street</i> , Washington street to Shawmut avenue		447	58
<i>Salem street</i> , Prince to Charter street		1,364	45
<i>St. Paul street</i> , Norway to Falmouth street		1	25
<i>St. Stephen street</i> , Bryant street to Massachusetts avenue		1,841	71
<i>Saratoga street</i> , at church. (See Bennington street.)			
<i>Saratoga street</i> , Wordsworth to Bennington street,		904	17
<i>Saunders street</i> , Cambridge to North Beacon street,		396	01
<i>Sawyer avenue</i> , Cushing avenue to Columbia road,		20	20
<i>School street</i> , Washington to Athelwold street		655	79
<i>Seaver street</i> , Columbia road to Erie street		726	41
<i>Seneca street</i> , Harrison avenue to Albany street		3,591	98
<i>Shawmut avenue</i> , West Canton to West Brookline street		649	57
<i>Shirley street</i> , Norfolk street to Massachusetts ave- nue		1,125	99
<i>Simmons street</i> , Linden park to Vernon street		5	00
<i>South street</i> , South Walter to Centre street		3,531	75
<i>South Huntington avenue</i> , Heath to Perkins street		1,198	14
<i>South Market street</i> , Commercial street to Atlantic avenue		645	39
<i>Sprague street</i> , Bunker Hill to Princeton street		489	79
<i>Carried forward</i>		\$422,404	54

<i>Brought forward</i>	\$422,404	54
<i>Stillman street, Endicott to Washington street</i>		
<i>North</i>	508	44
<i>Strathmore road, Englewood avenue to Brookline line</i>	320	69
<i>Strathmore road, Commonwealth avenue to Lothian road</i>	779	42
<i>Sullivan street, Main to Bartlett street</i>	2,325	73
<i>Sumner street, Cottage to Jeffries street</i>	2,417	03
<i>Sycamore street, Ashland to Florence street</i>	579	21
<i>Talbot avenue, Norfolk street to Blue Hill avenue,</i>	2,466	32
<i>Tenean street, Water to Freeport street.</i>	3,115	38
<i>Tremlett street, Washington to Hooper street</i>	610	10
<i>Tremont street, Washington street to Newton line,</i>	3,839	28
<i>Tremont street (east side), Northfield to Kendall street</i>	229	42
<i>Tremont street, Station street to Allard court</i>	429	08
<i>Union Park street, Washington street to Shawmut avenue</i>	474	82
<i>Vernon street, Tremont to Cabot street</i>	1	25
<i>Vernon street, Washington to Auburn street</i>	468	79
<i>Waldeck street, Tonawanda street to Melville avenue</i>	36	25
<i>Waldeck street, Geneva to Melville avenue</i>	1,108	53
<i>Walden, Centre and Bickford streets.</i>	132	36
<i>Walk Hill street, Wenham to Canterbury street</i>	4,176	27
<i>Waltham street, Shawmut to Harrison avenue</i>	771	12
<i>Warren street, Copeland street to Blue Hill avenue.</i>	3,529	32
<i>Warwick street, Hammond to Ruggles street</i>	1,059	81
<i>Washington street North (west side), Causeway to Medford street</i>	513	52
<i>Washington street, Armandine to Codman street</i>	891	38
<i>Washington street, Green street to the Arborway</i>	35,220	35
<i>Washington street, north side of Arborway to beyond New York, New Haven &amp; Hartford Railroad Bridge</i>	30,968	98
<i>Washington street (west side), Williams to Marvin street</i>	1,511	93
<i>Welles avenue, Argyle street to Talbot avenue</i>	2,717	35
<i>Wenham street, Weld street to Walk Hill street</i>	1,216	12
<i>West Concord street, Shawmut avenue to Tremont street</i>	47	02
<i>Westminster street, Hammond to Ruggles street</i>	815	18
<i>Whitney street, Tremont to Conant street</i>	124	48
<i>Whittier street, Columbus avenue to Cabot street,</i>	5	00
<i>Wigglesworth street, Longwood to Huntington avenue</i>	2,233	42
<i>Winthrop street, Monument square to Adams street,</i>	167	32
<i>Yeoman street, Albany to Hampden street</i>	739	54
 <b>Totals</b>	 <b>\$528,954</b>	 <b>75</b>

## STREET DEPARTMENT — HIGHWAY DIVISION. 193

## CHARGED TO SPECIAL APPROPRIATIONS.

<i>Hyde Park avenue, Ashland street to Hyde Park line</i>	\$24,006	63
<i>Old Colony avenue, construction of</i>	7,198	30
	<u>\$31,204</u>	<u>93</u>

## CHARGED TO APPROPRIATION FOR HIGHWAYS, MAKING OF.

<i>Addison street, Saratoga to Pope street</i>	\$2,862	89
<i>Ainsworth street, Centre to South street</i>	124	36
<i>Aldrich street, Belgrade avenue to Beech street</i>	10,483	20
<i>Alpha road, Waldeck to Park street</i>	6,980	81
<i>Alther street, Hampden to Reading street</i>	1,179	29
<i>Antrim street, Bennington to Ashley street</i>	3,517	40
<i>Ardale street, Centre to Walter street</i>	25	29
<i>Avenue Louis Pasteur, Longwood avenue to the Fenway</i>	26,434	63
<i>Balfour street, Wayland to Dalkeith street</i>	3,135	19
<i>Beaumont street, Adams to Carruth street</i>	7,980	33
<i>Benton street, Tremont to Columbus avenue</i>	1	25
<i>Berkeley street, Providence to Columbus avenue</i>	60	25
<i>Brinsley street, Columbia road to Washington street</i>	138	06
<i>Bucknam street, Fisher avenue to Lawn street</i>	865	28
<i>Carmen street, Shafter to Kilton street</i>	500	00
<i>Chipman street, Norfolk to Torrey street</i>	51	85
<i>Clarkwood street, Blue Hill avenue to Norfolk street</i>	5,654	31
<i>Colberg avenue, Belgrade avenue to Beech street</i>	9,583	35
<i>Corona street, Bowdoin street to Geneva avenue</i>	8	25
<i>Cottage terrace, East Cottage to Marshfield street</i>	3	25
<i>Covington street, East Eighth street to Columbia road</i>	109	98
<i>Damrell street, Dorchester avenue to Old Colony avenue</i>	10,769	43
<i>Danville street, Bellevue to Wren street</i>	42	06
<i>Deaconess road, Brookline avenue to Bellevue street</i>	2,448	84
<i>Dighton street, Circle to Chestnut Hill avenue</i>	2,413	89
<i>Dix place, Extension to Tremont street</i>	7	75
<i>Dorchester avenue, corner Washington street</i>	207	90
<i>Edgar street, Parker to Mechanic street</i>	1,419	38
<i>Emmet street, East Third to East Second street</i>	46	83
<i>Evergreen street, South Huntington avenue, easterly</i>	499	28
<i>Farquhar street, South to Selwyn street</i>	5,867	71
<i>Fenwood road, Huntington avenue to Brookline avenue</i>	150	00
<i>Fletcher street, Centre to South street</i>	7	20
<i>Carried forward</i>	\$103,579	49

<i>Brought forward</i>		\$103,579	49
<i>Geneva avenue</i> , Columbia road to Bowdoin street,		305	55
<i>Granville street</i> , Adams to Milton street.		79	06
<i>Greenwich street</i> , corner Dorchester avenue		271	12
<i>Greenwood street</i> , Harvard to Elmo street		237	11
<i>Grove street</i> , corner Washington street		1	75
<i>Hazelton street</i> , Blue Hill avenue, 562 feet westerly,		90	25
<i>Howe street</i> , Hancock street, 657 feet south-westerly		4,608	27
<i>Intervale street</i> , Blue Hill avenue to Normandy street		103	56
<i>Kempton street</i> , Huntington avenue to Fenwood road		3,404	61
<i>Kingsdale street</i> , Wales street, 250 feet easterly		3,039	89
<i>Leon street</i> , Ruggles to Greenleaf street		3,860	73
<i>Litchfield street</i> , Lincoln street to Western avenue,		27	23
<i>Marbury terrace</i> , Amory street to railroad		1,350	04
<i>Maybrook street</i> , Glenway to Greenwood street		426	67
<i>Mechanic street</i> , Ruggles to Edgar street		1,119	12
<i>Meehan street</i> , Williams to Keyes street		2,260	87
<i>Melbourne street</i> , Centre to Brent street		254	01
<i>Millet street</i> , Athelwold to Harvard street		8	27
<i>Montfern avenue</i> , Washington to Faneuil street		2	00
<i>Mora street</i> , Washington street to Milton avenue,		9,205	69
<i>Morton street</i> , Blue Hill avenue to Leslie street		176	02
<i>Newcastle road</i> , Faneuil to Hobson street		4	00
<i>Opera place</i> , Huntington avenue to St. Stephen street		6	42
<i>Penhallow street</i> , Melville avenue to Mather street,		450	38
<i>Plainfield street</i> , Williams to Keyes street		1,846	96
<i>Prescott street</i> , Frankfort street to railroad		11,474	62
<i>Public Alley No. 425</i> , Dartmouth to Exeter street, between Commonwealth avenue and Marlborough street		6	54
<i>Radcliffe street</i> , Harvard to Faxon street		639	40
<i>Ralston street</i> , Dorchester avenue to Boston street,		1,906	25
<i>Rexford street</i> , Blue Hill avenue to Oakland street,		2,652	47
<i>Rochdale street</i> , Cobden to Fenner street		1,951	92
<i>Rosemont street</i> , Gustine to Train street		3,247	14
<i>Sudan street</i> , Dorchester avenue to Sagamore street,		5,242	36
<i>Taft street</i> , Dorchester avenue to Pleasant street		3,292	40
<i>Wales street</i> , Harvard street to Talbot avenue		121	53
<i>Welles avenue</i> , Dorchester avenue to Argyle street,		6,738	70
<i>Wentworth street</i> , Norfolk street to Dunbar avenue,		6,303	65
<i>Westcott street</i> , Talbot avenue to West Park street,		113	43
<i>West Park street</i> , Bernard street to railroad		97	18
<i>Whitman street</i> , Norfolk street to Dunbar avenue,		6,149	33
		<u>\$186,655</u>	<u>99</u>

STREET DEPARTMENT — HIGHWAY DIVISION — PAVING SERVICE.  
**Maintenance of Macadam Streets.**

*Schedule of Amounts Resurfaced and Cost of Same for Years Ending January 31, 1905 to 1911.*

	<b>1905.</b>	<b>1906.</b>	<b>1907.</b>	<b>1908.</b>	<b>1909.</b>	<b>1910.</b>
Length of macadam in miles.....	337.10	341.22	346.02	348.62	350.85	353.81
Total area of macadam in square yards.....	6,155,668	6,269,208	6,348,359	6,406,246	6,436,823	6,480,706
Total cost of maintenance of macadam * .....	\$673,884.55	\$700,401.56	\$480,607.27	\$340,822.36	\$421,420.66	\$383,004.11
Cost per mile over entire mileage.....	\$2,000.00	\$2,041.00	\$1,389.00	\$977.62	\$1,201.14	\$1,082.51
Cost per square yard over entire area * .....	\$0.11	\$0.11	\$0.08	\$0.053	\$0.065	\$0.059
Length of macadam resurfaced yearly in miles.....	32.3	27.6	20.9	22.2	43.1	36.7
Cost per mile of macadam resurfaced yearly.....	\$18,300.00	\$22,017.00	\$17,742.00	\$11,705.13	\$7,726.90	\$7,756.18
Area of macadam resurfaced yearly in square yards.....	552,146	507,689	392,670	406,438	582,267	480,110
Cost per square yard of resurfacing over yearly area.....	\$1.07	\$1.19	\$0.95	\$0.639	\$0.572	\$0.593
Cost per square yard of street cleaning over entire macadam area.....	\$0.0135	\$0.0148	\$0.0173	\$0.01264	\$0.0137	\$0.0152
Percentage of maintenance and street improvements, appropriations used for maintenance of macadam * .....	41%	43.9%	36.5%	33.7%	33.6%	30.4%

\* Including street cleaning by Paving Division.

**New Edgestones.** (Does not include work done on streets laid out under chapter 393 of the Acts of 1906.)

*First Setting. Linear Feet.*

YEAR.	South Boston.	East Boston.	Charlestown.	Brighton.	West Roxbury.	Dorchester.	Roxbury.	City Proper.	Totals.
1905 .....	2,049	1,494	.....	1,867	6,056	13,548	1,814	4,705	31,533
1906 .....	2,078	628	.....	261	4,203	15,119	2,307	.....	24,596
1907 .....	414	1,263	250	908	349	4,781	1,663	534	10,162
1908 .....	656	798	.....	2,405	2,399	3,654	4,811	813	15,536
1909 .....	723	2,898	.....	214	779	4,833	2,380	5,253	17,080
1910 .....	328	1,182	100	983	5,190	8,044	6,810	50	22,687
Totals....	6,248	8,263	350	6,638	18,976	49,979	19,785	11,355	121,594

**New Brick Sidewalks.** (Does not include work done on streets laid out under chapter 393 of the Acts of 1906.)

*First Laying. Square Yards.*

YEAR.	South Boston.	East Boston.	Charlestown.	Brighton.	West Roxbury.	Dorchester.	Roxbury.	City Proper.	Totals.
1905 .....	1,186	1,980	.....	202	103	4,140	790	400	8,801
1906 .....	934	699	.....	106	.....	1,758	899	328	4,674
1907 .....	455	1,157	223	250	278	856	296	313	3,965
1908 .....	217	836	.....	.....	400	958	884	.....	3,364
1909 .....	311	2,597	.....	.....	156	406	5,359	.....	8,673
1910 .....	1,292	974	42	166	987	596	2,230	.....	6,287
Totals....	4,395	8,243	265	724	1,924	8,714	10,458	1,041	35,764

## Recapitulation, 1910.

	Edgestones. Linear Feet.	Brick. Square Yards.
South Boston Paving District No. 1.....	328	1,292
East Boston Paving District No. 2.....	1,182	974
Charlestown Paving District No. 3.....	100	42
Brighton Paving District No. 4.....	983	166
West Roxbury Paving District No. 5.....	5,190	987
Dorchester Paving Districts Nos. 6 and 9....	8,044	596
Roxbury Paving District No. 7.....	6,810	2,230
City Proper Paving Districts Nos. 8 and 10..	50	
	22,687	6,287

Loads of Dirt and Street Cleanings Removed from February 1, 1910,  
to January 31, 1911.*By Paving Service.*

DISTRICTS.	Single.	Double.	Cubic Yards.
South Boston.....	634	1,337	3,308
East Boston.....	355	73	501
Charlestown.....	301	83	467
Brighton.....	1,308	1,182	3,672
West Roxbury.....	1,547	1,090	3,727
Dorchester.....	836	1,381	3,598
Roxbury.....	6,293	2,830	11,953
South End.....	4,154	518	5,190
Ashmont.....	370	304	978
North End.....	1,516	20	1,556
Totals.....	17,314	8,818	34,950

*By Contract.*

DISTRICTS.	Loads.	Cubic Yards.
Brighton.....	3,147	4,582
West Roxbury.....	5,855	6,441
Dorchester and Ashmont.....	5,468½	6,003½
Totals.....	14,470½	17,026½

## Loads of Snow Removed from February 1, 1910, to January 31, 1911.

*By Paving Service.*

DISTRICTS.	Single.*	Double.†	Cubic Yards.	Total Cost.‡
South Boston.....	656	1,080	4,224	\$8,896 05
East Boston.....	733	44	1,232	4,192 64
Charlestown.....	900	364	2,442	5,781 34
Brighton.....	365	155	1,012	4,008 30
West Roxbury.....	3,656	685	7,539	7,655 95
Dorchester.....	184	144	708	4,087 09
Roxbury.....	903	155	1,820	11,475 84
South End.....	784	1,179	4,713	13,389 61
Ashmont.....	166	98	543	2,817 87
North End.....	1,271	931	4,699	11,842 71
Totals.....	9,618	4,835	28,932	\$74,147 40

\* Single load  $1\frac{1}{2}$  cubic yards.

† Double loads 3 cubic yards.

‡ This cost includes the plowing of gutters, cleaning of sidewalks, picking ice, etc., which is not carted away.

*By Contract.*

DISTRICTS.	Double.	Cubic Yards.	Cost per Cubic Yard.	Total Cost.
Snow District No. 1.....	1,217	3,648	\$0 29	*\$1,057 92
	277	831	37	307 47
Snow District No. 2.....	541	1,623	35	*568 05
	69	242	33	79 86
Snow District No. 3.....	577	1,746	37	*646 02
	51	165	32	52 80
Snow District No. 4.....	987	3,490	42	*1,465 80
Snow District No. 5.....	98	307	36	110 52
Snow District No. 6.....	227	680	39	265 20
Totals.....	4,044	12,732	.....	†\$4,553 64

\* Removed under 1909 contract.

† This amount does not include \$3,880.78 paid for snow removal out of appropriation for 1910 for work done in 1909.

## PERMITS FOR STREET OPENINGS.

Permits for making openings in the public streets have been issued during the year ending January 31, 1911, as follows:

NAME.	Permits.	Length in Feet.
Adams-Pond Company.....	121	11,389
American Telephone and Telegraph Company.....	11	720
City of Boston Fire Department.....	32	1,893
City of Boston Lamp Division.....	271	2,323
City of Boston Park Department.....	3	415
City of Boston Police Department.....	38	1,998
City of Boston Sewer Division.....	720	41,764
City of Boston Transit Commission.....	2	30
City of Boston Water Department.....	2,897	89,126
Boston Consolidated Gas Company.....	1,811	96,271
Boston Elevated Railway Company.....	246	82,294
Boston Low Tension Wire Association.....	8	802
Boston Pneumatic Transit Company.....	9	376
Boston, Revere Beach & Lynn Railroad.....	5	212
Boston & Albany Railroad.....	4	35
Boston & Maine Railroad.....	3	68
Charlestown Gas and Electric Company.....	191	4,571
East Boston Gas Company.....	214	14,039
Eastern Cold Storage Company.....	5	185
Edison Electric Illuminating Company.....	1,758	90,151
Hind, T. J. & Co.....	71	5,096
Lynn & Boston Railroad Company.....	2	1,030
Massachusetts Telephone and Telegraph Company,.....	4	94
Metropolitan Water and Sewerage Board.....	8	785
Murfeldt, W. A., Company.....	78	6,213
New England Telephone and Telegraph Company,.....	790	32,814
New York, New Haven & Hartford Railroad.....	7	235
Old Colony Street Railway Company.....	5	100
Postal Telegraph Cable Company.....	9	138
Quincy Market Cold Storage and Warehouse Company.....	29	800
Schoolhouse Commission.....	8	920
Simpson Brothers Corporation.....	71	2,434
Standard Oil Company.....	8	151
Telepost Company.....	10	2,985
Union Freight Railroad.....	5	450
United States Post Office Department.....	3	12
Warren Brothers Company.....	46	4,446
Western Union Telegraph Company.....	5	43
Miscellaneous.....	2,362	167,844
Emergency, Class A.....	1,070	.....
Emergency, Class A, returned as used.....	645	.....
Estimated length.....	.....	16,125
Totals.....	12,931	781,377

Making a total length of openings of about 148 miles.

Permits other than for street openings have been issued as follows:

Advertising by men wearing hat and coat lettered . . . . .	12
Cleaning snow from roofs . . . . .	93
Driving cattle through the streets . . . . .	67
Dumping snow in public alleys . . . . .	100
Erecting and repairing awnings . . . . .	3,100
Erecting and repairing buildings . . . . .	8,108
Emergency permits, class B . . . . .	477
Feeding horses on streets . . . . .	1,683
Loading and unloading goods . . . . .	47
Moving buildings in the streets . . . . .	23
Painting signs or notices on obstruction fences . . . . .	9
Placing signs flat on buildings . . . . .	2,275
Projecting signs or lamps . . . . .	230
Raising or lowering safes or heavy machinery . . . . .	433
Special permits for other than the above purposes . . . . .	263
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Totals as above . . . . .	16,920
Totals for opening streets (inclusive of poles) . . . . .	12,931
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Total of all permits issued . . . . .	29,851

#### SIDEWALK DEFECTS.

The inspection for sidewalk defects during the year has not been so extensive as that of the year previous, as the inspection force was put on the inspection of manholes in roadways. The results have shown that this is a matter that should not be overlooked if the public is to be protected against accidents involving not only physical injuries but financial loss to taxpayers through actions against the city for recompense. In addition to the work done by the Paving Division to repair these defects, notices were sent to property owners to make repairs as follows:

Wooden steps protruding beyond property line . . . . .	4
Curbing smooth around bulkheads . . . . .	89
Areas without guard rails . . . . .	159
Glass or bull's-eyes gone from coal-hole or area covers, . . . . .	447
Coal-hole covers smooth or broken . . . . .	150
Flagging around coal-hole covers broken . . . . .	31
Gratings in dangerous condition . . . . .	23
Bulkhead hinges high or broken . . . . .	41
Bulkhead covers in dangerous condition . . . . .	60
Basement windows not properly guarded . . . . .	10
Gutter stones in sidewalks . . . . .	60
Rain conductors discharging on sidewalks . . . . .	41

## STREET DEPARTMENT — HIGHWAY DIVISION. 201

Granite sidewalks over areas smooth . . . . .	25
Iron rims of area covers smooth . . . . .	7
Bricks over areas settled and broken . . . . .	29
Miscellaneous . . . . .	13

### MANHOLES AND COVERS.

An inspection of manholes, made to ascertain the general condition of same, resulted in notices being sent from this office to the effect that 607 of them needed repairs either in having dangerously smooth covers replaced or by changes in castings or grade. This inspection was brought about by the large number of cases of horses slipping or falling from this cause.

### STREET NUMBERING.

Under chapter 38, section 4, and chapter 47, section 104 of the Revised Ordinances of 1898 the street numbering inspector has assigned and changed numbers as shown on the following list:

	Whole Streets Numbered.	Whole Streets Renum-bered.	Parts of Streets Num-bered.	Estates Num-bered.	Estates Renum-bered.	Metal Figures Supplied.
East Boston.....	1	.....	1	98	.....	245
Charlestown.....	1	.....		25	.....	50
Boston Proper.....	2	.....		141	.....	337
South Boston.....	.....	.....		60	1	178
Dorchester.....	2	2	25	740	51	2,141
Roxbury.....	2	.....	4	196	3	509
West Roxbury.....	1	1	2	334	19	812
Brighton.....	2	.....	8	217	5	616
Totals.....	11	3	40	1,811	79	4,888

### CLAIMS.

The inspector assigned to the inspection of locations where accidents resulting in claims against the city are alleged to have occurred, has inspected and looked up data on 620 cases. This work is for the information of the superintendent of streets and the attorneys attached to the Law Department. Owing to the inspection of sidewalk area covers, coal holes and other openings in, or adjacent to, sidewalks, the number of defects has been reduced materially and the liability

has correspondingly decreased. The ordinary wear and tear on the sidewalks however is sufficient to keep an inspector busy on claim work and the average cost per claim is exceedingly low. One inspector covers the entire city on this work.

#### NOTICES TO MAKE REPAIRS.

There have been 15,467 notices sent to the district foremen of the Paving Division, contractors, public service corporations and others to make repairs in the streets where defects existed for which they were responsible.

There have been 384 notices sent to departments, corporations and others to perform work under the direction of the chief engineer of the Paving Division.

#### PLANS.

At the close of the year there were on file in the Permit Office plans indexed and filed as follows:

Pole locations . . . . .	2,904
Pole locations, general or blanket plans . . . . .	49
Electric conduit . . . . .	1,774
Electric conduit, general, etc. . . . .	20
Gas mains . . . . .	1,173
Gas mains, general, etc. . . . .	5
Street numbering . . . . .	1,820
Street railway tracks . . . . .	711
Street railway tracks, general, etc. . . . .	48
Areas under sidewalks . . . . .	119
Elevated structure . . . . .	27
Police signal . . . . .	30
Cold storage . . . . .	36
Pneumatic transit . . . . .	26
Pneumatic transit, general, etc. . . . .	8
Water mains . . . . .	22
Tunnels . . . . .	9
Test boxes . . . . .	8
Bridge grades . . . . .	8
Miscellaneous . . . . .	411
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	9,309

#### POLES.

Permits have been issued for the placing of one hundred sixty-seven (167) poles in public ways in accordance with plans filed in the Permit Office.

Permits have been issued for the removal of four hundred ninety-four (494) poles in accordance with plans filed in the Permit Office.

Permits for the resetting of one thousand three hundred fifty-seven (1,357) poles that were defective or unsafe were issued.

#### BONDS.

There are on file in the Permit Office one thousand five hundred forty-six (1,546) bonds covering the issuance of permits and maintenance of certain structures.

#### ARTIFICIAL STONE SIDEWALKS.

Two inspectors are assigned to inspect the condition of all artificial stone sidewalks existing and to oversee all such sidewalks laid during the year for persons other than the city. These men have charge of all repairs made on account of wear, openings by the public service corporations, drain layers and others and defects arising from any other cause. Their inspection this year covered the laying and repair of 270,860 square feet. The 174,325 feet laid under guaranty to the city on its contracts will come under their inspection in 1911. There are about three million feet of artificial stone sidewalk for the inspection of which these men are responsible.

In the spring of the year an inspection is made of all the sidewalks of this character that are under guaranty to the city and any defects discovered are reported to the parties who guaranteed, with orders to make immediate repairs. Defects discovered on walks on which the original guaranty has expired are reported to the party to whom the city has awarded the year's contract for patching.

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#### PROPERTY IN CHARGE OF THE HIGHWAY DIVISION (PAVING SERVICE).

##### *South Boston.*

*Columbia road*, corner H street, stable, carriage house, shed, tool house and office, built by the city on land containing 12,017 square feet, rented from William H. Hart.

*Columbia road*, corner of Hamlin street, lot of land used for storage purposes, containing 6,710 square feet, rented from Charles P. Mooney, agent.

*East Boston.*

*Chelsea street*, Nos. 492 and 494, wharf property, containing 118,584 square feet (L 3,117), purchased in 1897 from Francis S. Lally. This property sold in 1910 to the Standard Oil Company for \$20,100.

*East Eagle street*, corner Glendon street, sheds, stable and office building, erected by the city on wharf property containing 326,700 square feet, leased in 1900 from Blodgett & Whidden for a term of ten years. This property is used jointly with the Sewer, Sanitary and Street Cleaning and Watering Divisions.

*Charlestown.*

*Medford street*, foot of Elm street, wharf property, containing 44,194 square feet (Sur. Prog. 968), owned by the city. Upon this lot are a shed, stable and office building.

*Brighton.*

*Union street*, opposite Shepard street, lot of land containing 37,000 square feet, owned by the city. This lot is now in custody of Schoolhouse Commission.

*Chestnut Hill avenue*, ledge lot containing 569,776 square feet (L 1,630), purchased in 1882 by the city. Upon this lot are stone crusher, stable, shed and office building.

*West Roxbury.*

*Child street*, lot of land containing 43,024 square feet, owned by the city. Upon this lot are sheds, stable and office building.

*Mt. Vernon street*, near Pleasant street, lot of land, containing 16,275 square feet, belonging to the Schoolhouse Commission. Upon this lot is a stable and office building.

*Morton street*, near Canterbury street, lot of land containing 14,484 square feet, owned by the city and used for storage purposes.

*Rosemary street*, lot of land used for storage purposes, containing 3,780 square feet, rented from Edward Cook.

*Dorchester.*

*Hancock street*, opposite Bowdoin street, lot of land known as the almshouse lot, containing 104,132 square feet, which belonged to the town of Dorchester at the time of annexation. Upon this land are two stables, office, shed and tool house.

*Downer avenue*, lot of land containing 35,300 square feet, was purchased in 1871 to protect the almshouse lot.

*Codman street*, ledge lot containing 299,000 square feet, was purchased in 1870. Upon this lot is a shed containing steam engine and stone crusher, also a stable and tool house — 111,423 square feet additional bought in 1907 by the city.

*Brush Hill road*, Milton, lot of land containing 64,523 square feet, leased May 13, 1843, by the town of Dorchester for a term of 999 years. Lot of land adjoining above, containing 30,000 square feet, owned by the City of Boston. These lots are not now in use.

*Magnolia street*, near Bird street, lot of land containing 81,068 square feet, was purchased by the town of Dorchester in 1867. This lot is not now in use.

#### *Roxbury.*

*Highland street*, lot of land containing about 72,000 square feet, owned by the city. Upon this lot is a large brick stable erected in 1873-74 and used by the Sanitary and Paving Divisions; also a brick building used as a blacksmith shop and a shed for storage purposes.

*Washington street*, corner Dimock street, lot containing 134,671 square feet, owned by the city. Upon this lot are buildings containing steam engine, stone crusher and scales.

#### *South End.*

*Albany street*, opposite Sharon street, wharf lot, containing 89,224 square feet. Upon this lot are stables, office, blacksmith and carpenter shops. Wharf lot adjoining above, containing 39,511 square feet, used for storage purposes. Both these wharves are owned by the city.

*Massachusetts avenue*, near Magazine street, lot of land containing 317,322 square feet, rented from the New York, New Haven & Hartford Railroad Company and used for storage purposes.

#### *Back Bay.*

*Hereford street*, near Boylston street, lot of land containing 28,020 square feet, owned by the city. Upon this lot are a stable, shed and office building. This lot is now used by the Sewer Division.

#### *North End.*

*Commercial street*, No. 521, wharf lot, containing 22,555 square feet, owned by the city. Upon this lot are a stable, shed and office building.

*Atlantic avenue*, opposite Oliver street, wharf lot, containing 21,054 square feet, placed in charge of the Paving Division May 18, 1874. This property is now used by the Sanitary Division.

*Atlantic avenue*, opposite Oliver street, wharf property, containing 36,460 square feet, leased from J. H. Hecht on February 19, 1898, for ten years. This lease is held by the Sanitary Division, to which the Paving Division pays for storage purposes the sum of \$5,200 per year.

TABLE SHOWING THE COST OF ASPHALT REPAIRS PER SQUARE YARD OF STREET SURFACE FROM  
1900 TO 1910, INCLUSIVE.

Trinidad Asphalt.

*City Proper.*

STREET.	Limits,	Year Laid.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.
Albany street.....	80 feet north of Broadway, across Way street.	1899	.....	.....	.....	.....	*	.....	.....	\$0.009	.....	\$0.005	.....
Albany street.....	East Concord street to 225 feet north of Massachusetts avenue.	1884	\$0.117	\$0.029	\$0.019	\$0.090	\$0.029	\$0.082	\$0.055	.086	\$0.124	.401	\$0.346
Arch street.....	Franklin street to Milk street.....	1893	.075	.....	.065	.069	.091	.057	.062	.082†	.....	.....	.....
Arch street.....	200 feet south of Milk street to Franklin street.	1893	.....	.....	.....	.....	.....	.....	.....	.....	.329	.145	‡
Ash street.....	Bennet street to Nassau street.....	1887	.028	.128	.064	.018	.033	†	.....	.....	.....	†	.....
Barton court.....	Barton street to Brighton street.....	1894	.222	.113	.....	.....	†	.....	.....	.....	.....	.....	.....
Battery march street....	Milk street to Liberty square.....	1896	.....	*	.....	.....	.247	.004	.008	.070	.030	.013	.000
Beacon street.....	Charles street, across Arlington street.	1891	.086	.075	.024	.047	.043	.048	.049	.107	.062†	.....	.....
Beacon street.....	Charles street to Brimmer street.....	1891	.....	.....	.....	.....	.....	.....	.....	.....	.....	.109	.064
Beacon street.....	Easterly side of Dartmouth street to within 150 feet of westerly line of Gloucester street.	1892	.127	.049	.020	.033	.060	.013	.036	.063	.063	.084	.028
Beacon street.....	150 feet from westerly line of Gloucester street to 78 feet beyond westerly line of Gloucester street.	1898	.....	.....	.....	*	.004	.006	.014	.....	.010	.003	.....
Beacon street.....	78 feet west of Gloucester street to Massachusetts avenue.	1893	0.116	0.105	0.016	0.056	0.011	0.083	0.028	0.001†	.....	.....	.....

## STREET DEPARTMENT — HIGHWAY DIVISION. 207

Beacon street.....	78 feet west of Gloucester street to Hereford street.	1893	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.042	0.018
Bennet street.....	90 feet west of Harrison avenue to 162 feet east of Washington street.	1887	.043	.065	.030	.162	.019	†	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.036
Bond street.....	Hanson street to Milford street.....	1895	.....	.....	*	.080	.033	.070	130	†.157	.226	.038	.....	.....	.....	.....	.....	.....	0.098†
Boylston street.....	Easterly side of Berkley street across Clarendon street.	1897	.....	.....	.038	.068	.....	.072	.030	.037	.103	.091	.....	.....	.....	.....	.....	.....	27.5
Brattle square.....	Brattle street to Elm street.....	1888	.082	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	141
Brighton street.....	Leverett street to Allen street.....	1892	.230	.090	.094	.136	.063	.127	.143	.324	.744	.113	.....	.....	.....	.....	.....	.....	.....
Brimmer street.....	Beacon street to Pinekney street.....	1895	.....	.030	.037	.072	.060	.093	§	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Brimmer street.....	Beacon street to Byron street.....	1895	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.067
Brimmer street.....	Chestnut street to Pinekney street.....	1895	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.068
Broadway.....	Albany street to 105 feet west of Albany street.	1899	.....	.....	.....	.....	*	359	.037	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Castle street.....	Castle square, easterly.....	1899	.....	.....	.....	.....	*	.....	.....	0.025	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cazenove street.....	Columbus avenue to 45 feet south of Columbus avenue, also Columbus avenue intersection.	1899	.....	.....	.....	.....	*	.....	.....	.....	0.028	.....	.....	.....	.....	.....	.....	.....	0.016
Central street.....	Broad street to Kilby street.....	1887	.003	.063	.018	.239	.141	.169	.029	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.099
Chambers street.....	Green street, across Poplar street.....	1894	.173	.175	†	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Chambers street.....	Brighton street to Charles street.....	1895	.....	.....	.003	.068	.011	.025	.062	.073	.272	.004	.....	.....	.....	.....	.....	.....	0.086
Chandler street.....	At Castle square.....	1899	.....	.....	.....	.....	*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Charles street.....	Fruit street to Allen street.....	1909	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	120
Charter street.....	Hanover street, across Unity street....	1894	.....	.107	.031	.146	.189	.192	.148	.....	.....	.....	.....	.....	.....	.....	.....	.....	251

\* Guaranty expired in this year.      † Repaved in this year.  
§ From center of Byron street to Chestnut street repaved in this year.      ‡ Westerly side repaved in this year.

Cost of Trinidad Asphalt Repairs, 1900-1910.—Continued.

		1887	0.026	0.123	.036	†	*					
Exchange place.....	Congress street to Kilby street.....	1889	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ferdinand street.....	At Castle square.....	1889	.032	.....	.040	.045	.028	.....	.031	.022	.045	.045
Groton street.....	Washington street to Shawmut avenue.	1892	.....	.....	.....	.....	.....	.....	.....	.....	.....	.115
Hanover street.....	Hanover street to North street.....	1892	.060	.....	.016	.301	.006	.060	.059	.028	.237	.102
Harrison avenue.....	22 feet south of Kneeland street to 22 feet north of Harvard street.	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.271
Harrison avenue.....	East Newton street to East Springfield street.	1888-95	.090	.043	.080	.118	.017	.068	.115	.221	.369	.233
Harrison avenue.....	East Springfield street to 90 feet southerly.	1888	.....	.043	.080	.118	.017	.....	.....	.195	.880	.078
Hollis street.....	Tremont street, towards Washington street.	1891	.031	.130	.036	.164	.150	.051	.071	.173	.092	.073
Hudson street.....	Beach street to 90 feet north of Curve street (minus Kneeland and Harvard streets intersection).	1891	.155	.046	.064	.101	.037	.068	.132	.149	.175	.142
Kilby street.....	Liberty square.....	1881	.006	.037	.038	.028	.....	.....	.....	.....	.....	.....
Kilby street.....	Central street to Milk street (including Liberty square).	1881-98	.....	.....	*	.030	.056	.224	.149	.010†	.016	.040
Laconia street.....	Washington street to Harrison avenue.	1896	.....	*	.042	.083	.....	.027	.054	.056	.157	.018
La Grange street.....	Tremont street, towards Washington street.	1897	.....	*	.....	.....	.100	.068	.132	.110	.180	.074
Lincoln place.....	Worcester street to Springfield street.	1897	.....	*	.....	.....	.....	.....	.024	.....	.037	.021
Malcolm street.....	Mt. Vernon street to Chestnut street.	1892	.....	.....	.010	.019	.....	.065	.....	.101	.128	.104
Mason street.....	449 feet south of West street to 22 feet north of Avery street.	1909	.....	.....	.....	.....	.....	.....	.....	.....	.....	.063†

\*Guaranty expired in this year.

† Part repaved in this year.

## Cost of Trinidad Asphalt Repairs, 1900-1910.—Continued.

STREET.	LIMITS.	YEAR LAID.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.
Massachusetts avenue,	Columbus avenue to Tremont street (southerly roadway).	1892	\$0.045	\$0.053	\$0.033	\$0.058	\$0.031	\$0.034	\$0.019	\$0.073	\$0.088	\$0.070	\$0.070†
Massachusetts avenue,	Trenont street to Shawmut avenue (southerly roadway).	1892	.045	.053	.033	.058	.031	.017	.015	.019	.063	.045	.017†
Massachusetts avenue,	Shawmut, avenue to Washington street (southerly roadway).	1892	.045	.053	.033	.058	.031	.013	.048	.043	.200	.021	.066
Moon street.....	North square to Lewis street.....	1891	.034	.017	.010	.098	.....	.....	.060	.096	.035	.150	.105
North Bennet street ..	Hanover street to Salem street.....	1883	.140	.127	.132	.044	†	.....	.....	.....	.....	.....	.....
North Margin street..	Stillman street to Thacher street.....	1895	.....	.....	.015	.097	.015	.029	.032	.008	.114	.005	.024
Oxford street.....	Beach street to Essex street.....	1895	.....	.010	.....	.048	.006	.096	.049	.076	.159	.107	.285
Parkman street.....	North Anderson street, across Blossom street.	1898	.....	.....	.....	*	.....	.....	.007	.034	.020	.....	.044
Parmenter street.....	Hanover street to Salem street.....	1893	.184	.....	.....	†	.....	.....	.....	.....	.....	.....	.....
Pinckney street.....	Charles street, across Brimmer street,	1895	.....	.....	.002	.113	.032	.015	.089	.096	.248	.056	.147
Pine street.....	Washington street to Harrison avenue,	1896	.....	*	.....	.052	.....	.081	.015	.032	.037	.040	.055
Pleasant street.....	Tremont street to Shawmut avenue.....	1900	.....	.....	.....	.....	.....	*	.648	1.717	.314	.399	.557
Poplar street.....	Chambers street to Charles street.....	1887-92	.097	.068	.054	.128	.032	.057	.050	.101	.217	.022	.071
Public Alley No. 425†..	Between Beacon street and Marlborough street, from Berkeley street to Clarendon street.	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.344
Spring street.....	Poplar street to Leverett street.....	1895	.....	.024	.084	.279	.091	.107	.187	.381	.440	.069	.128
Stevens street.....	Lincoln place, towards Shawmut ave..	1897	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stillman street.....	Endicott st., across North Margin st..	1892	.038	.....	.030	.123	.....	.009	.038	.047	.349	.009	.005
Stoddard street.....	Howard street to Court street.....	1892	.408	.....	.014	.099	.....	.....	.212	.040	.049	.....	.176

Sun-court street.....	North street to Moon street.....	1891	.020	.182	.024	.295	.069	.244	.108	.101	.304	.118	.060
Temple place.....	Washington street to Tremont street.	1900	..	..	..	..	..	..	..	..	..	..	.017*
Thacher street.....	Washington St. North to Endicott st. .	1892	.011	.011	..	.164	.006	.020	.043	.168	.405	.014	.226
Tileston street.....	155 feet west of Hanover street, across Unity street.	1887	.135	.153	.209	.060	.173	†	..	..	..	..	..
Tileston street.....	Unity street to Salem street.....	1895	*	..	..	..	.019	..	..	.025	.270	..	.228
Tremont street.....	Scollay square to Boylston street (minus Beacon street intersection).	1900	..	..	..	..	..	..	..	..	..	..	.074*
Tremont street.....	At Castle square.....	1899	..	..	..	..	*	..	..	..	..	..	..
Trinity place.....	St. James street across Stuart street..	..	..	..	..	..	..	..	..	..	..	*	.007
Unity street.....	Charter street to Tileston street.....	1897	..	..	*	.021	.046	.066	.067	.197	.182	.013	.126
Warren street.....	Elliot street to Tremont street.....	1884-91	.030	.069	.020	.044	.050	.110	.038	.031	.112	.038	.319
Water street.....	Shawmut avenue to Washington street.	1891	.030	.069	.020	.037	.027	.108	.067	.088	.120	.050	.233
Water street.....	Congress street to Kilby street.....	1889	.432	.203	*	..	..	..	..	..	..	..	..
Water street.....	Liberty square to Broad street.....	1896	..	*	.007	.011	.050	.013	.018	.029	.025	.038	.059
Wiget street.....	Salem street to North Margin street ..	1897	..	*	..	.177	..	..	.063	.060	.186	.045	.046
Wiggin street.....	North Bennet street to Tileston street..	1887	.179	..	.178	.068	.229	.197†	..	..	..	..	..

*Charlestown.*

Austin street.....	Seminary place to Lawrence street.....	1891	..	\$0.050	\$0.010	\$0.082	\$0.027	\$0.042	\$0.037	\$0.124	\$0.151	\$0.142	\$0.173
Bunker Hill street.....	At Tufts street.....	1897	..	..	*	..	..	..	..	..	..	..	..
Charlestown Bridge....	Over Fitchburg Railroad.....	1899	..	..	.216	.877	1.127	.341	.336	1.272	.632	.503	1.099
Corey street.....	124 feet north of Moulton street to Moulton street.	1897	..	..	*	..	..	.042	..	.236	.238	..	.132
Moulton street.....	Easterly side of Corey st. to Vine st. ....	1897	..	..	*	..	..	..	..	..	.025	..	..

\* Guaranty expired in this year.

† Repaved in this year.

## Cost of Trinidad Asphalt Repairs, 1900-1910.—Concluded.

STREET.	Limits.	Year Laid.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.
Moulton street.....	Vine street to Bunker Hill street.....	1897	.....	.....	*	.....	.....	\$0.012	\$0.039	.....	\$0.007	\$0.008	\$0.032
Tufts street.....	Bunker Hill street, 141 feet northerly..	1897	.....	.....	*	.....	.....	.....	\$0.038	.....	.070	.044	.....
Vine street.....	Bunker Hill street, across Moulton st..	1897	.....	.....	*	.....	.....	.....	.....	.031	.007	.027	.....
<i>South Boston.</i>													
D street.....	West Fifth street to Gold street.....	1889	\$0.016	\$0.048	\$0.036	\$0.221	\$0.032	\$0.051	\$0.165	\$0.137	\$0.302	\$0.126	\$0.388
E street.....	West Third street to Bolton street.....	1892	.....	.....	.....	.....	.053	.035	.026	.....	.213	.025	.225
Rogers street.....	Dorchester street to Preble street.....	1891	.....	.....	.....	.047	.....	.....	.....	.....	.074	.....	.111
West Sixth street.....	160 feet east of C st., towards D street.	1887	.019	.....	.154	.178	.032	.073	.....	.....	.....	.....	.....
West Third street.....	153 feet west of E street, across E st..	1892	.....	.....	.031	.....	.054	.....	.032	.027	.117	.007	.134
<i>Roxbury.</i>													
Cabot street.....	Tremont street to Ruggles street.....	1891	\$0.046	\$0.022	\$0.027	\$0.023	\$0.002	\$0.019	\$0.025	\$0.069	\$0.078	\$0.014	\$0.144
Cabot street.....	Easterly side of Ruggles street to Vernon street.	1892	.012	.....	.010	.012	.006	.020	.034	.....	.100	.108	.089
Cabot street.....	Easterly side of Vernon street to Linden Park street.	1897	.....	.....	*	.....	.001	.....	.008	.013	.161	.024	.011
Columbus avenue.....	301 feet south of Camden street, across Terry street.	1896	.....	.....	*	.020	.037	.123	.060	†	.....	.....	.....

\* Guaranty expired in this year.

† Repaved in this year.

**Cost of Sicilian Rock Asphalt Repairs, 1900=1910.**  
*City Proper.*

STREET.	Limits.	Year Laid.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.
Acton street.....	Washington street to Bradford street.....	1896	.....*	\$0.054	.....*	\$0.008	\$0.010	\$0.051	\$0.018	\$0.129	\$0.095	\$0.052	.....
Albany street.....	Easterly side of Stoughton street, across East Concord street.....	1897	.....*	\$0.185	.205	.048	.....*	.....*	.....*	.....*	.....*	.....*	.....
Ash street.....	Oak street, across Nassau street.....	1895	\$0.115	.....*	.196	.....*	.183	.029	.....*	.070	.....*	.....*	†
Avery street.....	Washington street to Mason street.....	1897	.....*	*	.175	.....*	*	.099	.....*	.....*	.096	.100	.....
Barton street.....	Leverett street to Milton street.....	1895	.....*	\$0.101	.015	.....*	.052	.019	.035	.035	.101	.005	.025
Bradford street.....	Waltham street to Shawmut avenue.....	1897	.....*	*	.....*	.....*	.021	.001	.011	.018	.010	.021	.021
Cobb street.....	Washington street to Shawmut ave.....	1897	.....*	*	.....*	.....*	.....*	.042	.019	.006	.008	.....*	.047
Deeatur street.....	Washington street to Harrison ave.....	1892	.080	.....*	.098	.174	.052	.126	.119	.187	.460	.094	.379
Dwight street.....	Shawmut avenue to Tremont street.....	1893	.015	.....*	.030	.....*	.013	.022	.005	.041	.005	.025	.028
Exeter place.....	Channey street to Harrison avenue.....	1897	.....*	.....*	.....*	.....*	.046	.032	.105	.008	.....*	.....*	.074
Fabin street.....	Newland street to Ivanhoe street.....	1895	.....*	.....*	.....*	.....*	.....*	.067	.....*	.....*	.008	.....*	.....
Fay street.....	Dover street to Harrison avenue.....	1894	.....*	.099	.296	.048	.....*	.014	.020	.084	.015	.033	.....
Hamburg street.....	Mystic street to Harrison avenue.....	1896	.....*	.....*	.035	.022	.006	.023	.020	.010	.010	.....*	.....
Hanover street.....	Tileston street, across Charter street.....	1896	.....*	.105	.179	.065	.144	.146	.122	.234	.137	.344	.....
Huntington avenue.....	Boston & Albany Railroad to Massachusetts avenue.....	1896	.....*	.008	.013	.012	.017	.015	.035	.039	.128	.042	.....
Kingston street.....	Beach street to Essex street.....	1899	.....*	.300	.099	.533	.198	.256	.325	†	.....*	* .080	.355
Mason street.....	From 213 feet south of West street to 444 feet south of West street.....	1894	.191	.....*	.....*	.....*	.....*	.....*	.....*	.....*	.....*	.....*	.....

\* Guaranty expired in this year.

† Repaved in this year.

‡ Part repaved in this year.

## Cost of Sicilian Rock Asphalt Repairs, 1900-1910.—Concluded.

STREET.	Limits.	Year Laid.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.
Massachusetts avenue,	Washington street to Harrison avenue (southerly roadway).	1894	\$0.010	.....	\$0.014	\$0.019	\$0.011	\$0.013	\$0.035	\$0.002	\$0.029	\$0.014	\$0.080
Massachusetts avenue,	Harrison avenue to Albany street (southerly roadway).	1894	.010	.....	.014	.019	.011	.034	.003	.010	.055	.045	.165
Mayo street.....	Castle street to Cobb street.....	1897	.....	*	.....	.....	.014	.....	.065	.011	.....	.....	.027
Meander street.....	East Dedham street to Malden street,	1896	.....	*	.....	.....	.182	.....	.002	.....	.....	.015	.089
Motte street.....	Washington street to Harrison avenue,	1892-99	.....	\$0.161	.....	.....	.....	.025	.....	.....	.147	.032	.017
Mystic street.....	Malden street to East Brookline street,	1895	.....	*	.....	.....	.046	.012	.036	.016	.015	.027	.010
North Margin street..	Thacher street, towards Endicott st.,	1897	.....	*	.....	.....	.095	.027	.095	.015	.077	.105	.003
Norwich street.....	Mystic street to Meander street.....	1896	.....	*	.....	.....	.027	.....	.029	.015	.....	.014	.016
Ohio street.....	Washington st. to Shawmut ave.....	1896	.....	*	.....	.....	.043	.....	.077	.040	.021	.030	.088
Pemberton square....	Front of Suffolk Court House.....	1894	.....	.....	.....	.....	.....	.030	.008	.012	.002	.013	.....
Prince street.....	Hanover street to Bennet avenue.....	1895	.....	.....	.....	.....	.052	.190	.007	.035	.038	.073	.021
Shawmut avenue.....	132 feet south of Castle street, across Cherry street.	1898	.....	.....	.....	.....	*	.057	.069	.081	.150	.198	.194
Taylor street.....	Dwight street to Milford street.....	1896	.....	*	.....	.....	.014	.....	.....	.048	.020	.....	.020
Whitmore street.....	Kneeland street to Harvard street.....	1895	.....	.....	.....	.....	.023	.....	.....	.063	.030	.....	.026

## South Boston.

Athens street.....	West Second street to A street.....	1895	.....	.....	.....	.....	.....	.....	.....	\$0.019	.....	.....	\$0.073
Athens street.....	B street to C street.....	1892	.....	.....	.....	.....	.....	.....	.....	.028	\$0.013	.010	.....

East Broadway.....	Front of Lincoln School.....	1897	.....	*	\$0.035	\$0.056	.110	.062	.048	\$0.052	.....	\$0.071
K street.....	East Sixth street to East Eighth street,	1896	.....	*	\$0.084	.129	.054	.048	.060	.106	.056	.094
West Broadway.....	From 196 feet east of easterly line of Dorchester avenue to A street.	1892	\$0.213	.....	.260	.110	.066	.183	.153	.200	.274	.271
West Broadway.....	Gardner place to 150 feet easterly.....	1893	.060	\$0.229	.344	.125	.122	.152	.195	.246	.440	.298
West Broadway.....	New England Bridge to E street (4-foot gutters).	1897	.....	*	.092	.121	.209	.159	.107	.154	.040	.014
West Broadway.....	150 feet west of F street to 267 feet east of F street.	1897	.....	*	.....	.030	.112	.022	.023	.133	.049	.143
West Broadway.....	267 feet east of F street to 44 feet west of Dorchester street.	1898	.....	*	.....	* .031	.062	.019	.029	.037	.035	.084

*Roxbury.*

Columbus avenue.....	Terry street to 61 feet north of Station street.	1896	.....	*	\$0.167	\$0.192	\$0.104	\$0.189	†	†	.....	.....
Huntington avenue.....	Easterly side of Cumberland street to Massachusetts avenue.	1896	.....	*	.008	.013	.012	.....	.....	.....	.....	.....
Huntington avenue.....	Massachusetts ave. to Gainsborough st.	1896	.....	*	.....	.013	.012	.019	\$0.003	\$0.013	\$0.038	\$0.171
Ipswich street,.....	Bridge over waterway.....	1898	.....	*	.....	*	.....	.102	.....	.....	.....	.....

\* Guaranty expired in this year.

† Repaved in this year.

## Cost of Seyssel Rock Asphalt Repairs, 1900-1910.

STREET.	Limits.	Year Laid.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.
Genesee street.....	Harrison avenue to Albany street....	1899	.....	.....	.....	*	\$0.039	\$0.007	\$0.016	\$0.010	\$0.084	\$0.069	
Mason street.....	444 feet south of West street to Avery street.	1899	.....	.....	.....	*	.....	.045	.097	.086	.025†		
Milton street.....	Brighton street to Spring street.....	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.026
Oswego street.....	Harrison avenue to Albany street.....	1899	.....	.....	.....	*	.006	.008	.009	.022	.032	.041	
Paul street.....	Emerald street to Village street.....	1897-99	.....	.....	.....	.....	.....	.....	.023	.077	.....	.056	
Paul street.....	Village street to Tremont street.....	1897-99	.....	.....	*	.....	.....	.015	.....	.028	.094	.040	.138
Pelham street.....	Washington street to Shawmut ave.....	1897	.....	.....	*	.....	\$0.091	.....	.016	.013	.042	.078	.027
Watertown street.....	Washington street to Shawmut ave.....	1897	.....	.....	*	.....	.149	.021	.089	.085	.093	.047	.131

## Other Asphalt.

STREET.	Limits.	Year Laid.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.
Harris street.....	Hanover st. to North st. (coal tar).....	.....	\$0.051	.....	\$0.076	.....	†	.....	.....	.....	.....	.....	.....
I street.....	East Broadway to East Fourth st. (coal tar).	.....	.264	.....	.108	\$0.282	.....	.....	\$0.180	\$0.049	\$0.052	\$0.108	.....
Massachusetts ave.....	Columbus avenue to Tremont street northerly roadway (asphaltina).	1897	.....	.....	*	.....	\$0.104	.093	.151	†	.....	.....	.....
Mt. Vernon street.....	Archway under State House (Limmer rock asphalt).	1897	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

\* Guaranty expired in this year.

† Repaved in this year.

‡ Part repaired in this year.

LIST OF STREETS PAVED WITH TRINIDAD ASPHALT, JANUARY 31, 1911.  
*City Proper.*

NAME.	Limits.	Length in Feet.	Area, Square Yards.	Year Laid.	Guaranty Expires.
Albany street.....	\$1 feet north of Broadway, across Way street.....	108	408	1899	
Albany street.....	East Concord street to 225 feet north of Massachusetts avenue.....	446	2,676	1884	
Andrews street.....	East Dedham street to East Canton street.....	216	312	1899	
Arch street.....	Milk street to 200 feet south of Milk street.....	200	580	1907	July 27, 1917.
Arch street.....	200 feet south of Milk street to Franklin street.....	226	687	1910	June 3, 1913.
Arlington street.....	Boylston street to Beacon street.....	1,324	7,355	1901	June 16, 1911.
Ash street.....	Bennet street to Nassau street.....	232	452	1905	Oct. 5, 1915.
Avon street.....	Washington street to Chauncy street.....	428	1,061	1901	Oct. 29, 1911.
Barton court.....	Barton street to Brighton street.....	134	182	1904	Sept. 7, 1914.
Battery-march street.....	Milk street to Liberty square.....	150	466	1896	
Beacon street.....	Charles street to southerly side of Brimmer street.....	495	2,298	1891	
Beacon street.....	Charles street, across Arlington street, southerly roadway.....	.....	2,108	1901	June 29, 1911.
Beacon street.....	Easterly side of Dartmouth street to Hereford street.....	2,285	12,134	1909	Nov. 4, 1914.
Beacon street.....	Hereford street to Massachusetts avenue.....	698	3,728	1907	Sept. 16, 1917.
Bennet street.....	Ash street to Harrison avenue.....	248	469	1905	Aug. 18, 1915.
Berkley street.....	Boylston street to St. James avenue.....	273	678	1902	Aug. 4, 1912.
Berkeley street.....	Easterly roadway, Boylston street to Providence street.....	.....	329	1906	Dec. 31, 1916.
Berwick park.....	At Columbus avenue (crosswall).....	9	34	1907	Jan. 8, 1917.

## List of Streets Paved with Trinidad Asphalt.—Continued.

NAME.	Limits.	Length in Feet.	Area, Square Yards.	Year Laid.	Guaranty Expires.
Bond street.....	Hanson street to Milford street.....	192	426	1895	
Bosworth street.....	At Tremont street.....	13	28	1900	
Boylston street.....	Tremont street, across Boylston place.....	357	1,395	1901	Oct. 9, 1911.
Boylston street.....	Charles street to Arlington street.....	868	4,802	1901	Oct. 9, 1911.
Boylston street.....	Easterly side of Berkeley street, across Clarendon street, southerly side.....	245	1897		
Boylston street.....	Easterly side of Berkeley street, across Clarendon street, southerly side.....	656	1,040	1910	June 8, 1913.
Boylston street.....	Easterly side of Berkeley street, across Clarendon street, northerly side.....	1,379	1907	June 10, 1917.	
Boylston street.....	Clarendon street, across Dartmouth street.....	649	2,332	1901	Oct. 23, 1911.
Brattle square.....	Brattle street to Elm street.....	281	670	1888	
Brighton street.....	Leverett street to Allen street (cobble base).....	845	1,865	1892	
Brimmer street.....	Beacon street to the center of Byron street.....	116	322	1895	
Brimmer street.....	Center of Byron street to Chestnut street.....	180	536	1906	
Brimmer street.....	Chestnut street to Pinckney street.....	791	2,442	1895	
Broadway.....	Albany street to 105 feet west of Albany street.....	105	600	1899	
Bromfield street.....	At Tremont street.....	12	31	1900	
Castle street.....	Castle square, easterly.....	.....	427	1899	
Cazenove street.....	Columbus avenue to 45 feet south of Columbus avenue, also intersection of Columbus avenue.....	45	134	1899	
Central street.....	Broad street to Kilby street.....	313	869	1887	

Chambers street.....	Green street, across Poplar street.....	460	1,022	1902	Oct. 25, 1912.
Chambers street.....	Brighton street, across Auburn street.....	152	337	1895	
Chambers street.....	Auburn street to Charles street (cobble base).....	120	267	1895	
Chandler street.....	At Castle square.....	.....	51	1899	
Charles street.....	Southerly side of Fruit street, across Allen street.....	709	1,706	1909	
Charter street.....	14 feet west of Hanover street, across Unity street (cobble base).....	304	586	1894	
Cherry street.....	Washington street to Shawmut avenue.....	334	594	1892	
Clarendon park.....	At Columbus avenue (crosswalk).....	9	34	1907	Jan. 8, 1917.
Clark street.....	18 feet east of Hanover street to North street (cobble base).....	301	579	1892	
Columbus avenue.....	134 feet south of Ferdinand street to Boston & Albany Railroad Bridge.....	912	3,570	1904	Nov. 25, 1914.
Columbus avenue.....	Boston & Albany Railroad Bridge to northerly side of Camden street.....	4,083	15,742	1907	Jan. 8, 1917.
Concord square.....	At Columbus avenue (crosswalk).....	9	41	1907	Jan. 8, 1917.
Congress square.....	From Congress square to Congress street.....	209	400	1900	
Cooper street.....	North Margin street to Endicott street.....	163	504	1887	
Cooper street.....	East side of Endicott street to Washington Street North.....	241	709	1908	Sept. 16, 1918.
Court street.....	Washington street to westerly side of Old Court House.....	296	823	1904	July 6, 1914.
Court square.....	From Court street to 20 feet south on the easterly side.....	20	50	1904	July 6, 1914.
Court square.....	From 20 feet south of Court street on the easterly and southerly side to the westerly side.	348	1,050	1894	
Court square.....	From Court street to 291 feet on the westerly side of the Old Court House.....	291	703	1904	Sept. 26, 1914.
Dartmouth street.....	Buckingham street to 127 feet south of Stuart street.....	101	280	1899	
Dartmouth street.....	Huntington avenue to Boylston street.....	234	1,890	1901	Oct. 23, 1911.
Dartmouth street.....	Boylston street to Newbury street.....	257	1,600	1894	

List of Streets Paved with Trinidad Asphalt.—*Continued.*

NAME.	Limits.	Length in Feet.	Area, Square Yards.	Year Laid.	Guaranty Expires.
Dartmouth street.....	Boylston street to Newbury street (car tracks removed).....	.....	400	1903	June 26, 1913.
Davis street.....	Washington street to Harrison avenue.....	323	646	1892	
Devonshire street.....	Milk street to Water street.....	262	786	1909	
Devonshire street.....	Milk street to Franklin street.....	417	1,404	1905	Oct. 19, 1915.
Dillon street.....	Lenox street to Sawyer street.....	218	315	1902	Nov. 28, 1912.
Doane street.....	135 feet west of Broad street to Broad street.....	135	270	1910	Nov. 21, 1913.
Doane street.....	135 feet west of Broad street to Kilby street.....	174	350	1881	
Edinboro street.....	Essex street to Beach street.....	470	924	1895	
Endicott street.....	Cooper street, across Thacher street.....	318	1,078	1899	
Exchange place.....	Congress street to Kilby street.....	245	708	1903	Dec. 4, 1913.
Ferdinand street.....	At Castle square.....	37	107	1899	
Greenwich park.....	At Columbus avenue (crosswalk).....	9	34	1907	Jan. 8, 1917.
Groton street.....	Washington street to Shawmut avenue (block paving).....	335	558	1892	
Hanover street.....	Tileston street, across Charter street (west side).....	315	425	1907	July 22, 1917.
Hanover avenue.....	Hanover street to North street (cobble).....	307	266	1892	
Harris street.....	Hanover street to North street.....	300	373	1904	Oct. 22, 1914.
Harrison avenue.....	22 feet south of Kneeland street to 22 feet north of Harvard street.....	249	885	1899	
Harrison avenue.....	Asylum street, across Davis street.....	158	300	1901	Aug. 24, 1911.
Harrison avenue.....	Northerly side of Decatur street, across Gloucester place.....	143	270	1905	Sept. 13, 1915.

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Harrison avenue.....	Northerly side Union Park street, across Malden street.....	248	634	1903	April 2, 1913.
Harrison avenue.....	East Newton street to East Springfield street.....	922	2,664	1888-95	
Harrison avenue.....	East Springfield street to 97 feet southerly.....	.....	140	1888	
Hawes street.....	Congress street to Kilby street.....	258	254	1904	Nov. 6, 1914.
Hayward place.....	9 feet east of Washington street to 85 feet east of Washington street.....	76	172	1906	Sept. 1, 1916.
Hayward place.....	85 feet east of Washington street to Harrison avenue.....	175	395	1905	Aug. 21, 1915.
Hollis street.....	Tremont street toward Washington street (block base).....	261	493	1891	
Holyoke street.....	At Columbus avenue (crosswalk).....	9	34	1907	Jan. 8, 1917.
Hudson street.....	Beach street to 90 feet north of Curve street, minus Kneeland street and Harvard street intersections.	1,407	3,938	1891	
Huntington avenue.....	Boylston street, across Dartmouth street.....	624	5,862	1901	Oct. 23, 1911.
Huntington avenue †.....	Boston & Albany Railroad Bridge to 70 feet southerly.....	70	434	1909	Dec. 15, 1914.
Huntington avenue, westerly roadway,	From 685 feet north of West Newton street to 38 feet north of West Newton street.	.....	1,831	1907	Oct. 24, 1917.
Kilby street.....	Milk street to Central street, west side.....	394	1,292	1898	
Kilby street.....	Liberty square.....	.....	505	1881	
Kilby street.....	Central street to State street.....	240	672	1904	May 21, 1914.
Kingston street.....	Beach street to Essex street.....	479	1,828	1910	Oct. 22, 1915.
Laconia street.....	Washington street to Harrison avenue.....	330	727	1896	
La Grange street.....	Tremont street, towards Washington street.....	181	355	1897	
Lincoln place.....	Worcester street to West Springfield street.....	217	313	1897	
Lynn street.....	Cooper street to Thacher street.....	294	457	1906	Aug. 21, 1916.
Malcolm street.....	54 feet south of Mt. Vernon street to Chestnut street (cobble base).....	208	156	1892	
Malden street.....	Washington street to Harrison avenue.....	531	1,534	1902	Dec. 8, 1912.

† See note on page 228.

## List of Streets Paved with Trinidad Asphalt.—Continued.

NAME.	Limits.	Length in Feet.	Area, Square Yards.	Year Laid.	Guaranty Expires.
Mason street.....	Avery street to Tremont street.....	85	206	1900	
Mason street.....	449 feet south of West street to 22 feet north of Avery street.....	96	200	1909	
Moon street.....	North square to Lewis street (cobble base).....	166	306	1891	
Norman street.....	Green street to South Margin street.....	398	712	1905	Aug. 10, 1915.
North Bennet street.....	Hanover street to Salem street.....	557	928	1904	Oct. 1, 1914.
Northampton street.....	Washington street to Shawmut avenue.....	370	648	1905	Oct. 9, 1915.
Northampton street.....	At Columbus avenue (crosswalk).....	9	34	1907	Jan. 8, 1917.
North Margin street.....	Stillman street to Thacher street.....	519	1,178	1895	
Oxford street.....	Beach street to Essex street (macadam).....	430	735	1895	
Parkman street.....	North Anderson street, across Blossom street.....	234	534	1898	
Parmenter street.....	Hanover street to Salem street.....	279	764	1902	Sept. 13, 1912.
Parnell street.....	Lenox street to Sawyer street.....	264	367	1902	Nov. 28, 1912.
Pinckney street.....	Charles street, across Brimmer street.....	271	723	1895	
Pine street.....	Washington street to Harrison avenue.....	419	597	1896	
Pleasant street.....	Bridge over Boston Elevated Railway.....	55	128	1900	
Poplar street.....	Chambers street to Charles street (cobble base).....	1,188	2,442	1887-92	
Porter street.....	At Pleasant street (crossing).....	12	17	1900	
Public Alley No. 301 †.....	Pinckney street to River street.....	270	400	1897	

Public Alley No. 401 † .....	Between Huntington avenue and St. Botolph street, from Irvington street to Garrison street.	350	362	1899
Public Alley No. 402 † .....	Between Huntington avenue and St. Botolph street, from Garrison street to West Newton street.	358	374	1899
Public Alley No. 403 † .....	Between Huntington avenue and St. Botolph street, from West Newton street to Cumberland street.	355	370	1899
Public Alley No. 414 .....	Between Beacon street and Marlborough street, from 53 feet east of Massachusetts avenue to Hereford street.	614	574	1901 Oct. 24, 1911.
Public Alley No. 415 .....	Between Beacon street and Marlborough street, from Hereford street to Gloucester street.	398	382	1901 Oct. 12, 1911.
Public Alley No. 416 .....	Between Beacon street and Marlborough street, from Gloucester street to Fairfield street.	524	494	1901 Nov. 14, 1911.
Public Alley No. 417 .....	Between Beacon street and Marlborough street, from Fairfield street to Exeter street.	624	583	1901 Nov. 29, 1911.
Public Alley No. 419 † .....	Between Beacon street and Marlborough street, from Dartmouth street to Clarendon street.	575	511	1899
Public Alley No. 420 † .....	Between Beacon street and Marlborough street, from Clarendon street to Berkeley street.	580	515	1897
Public Alley No. 422 .....	Between Commonwealth avenue and Marlborough street, from Arlington street to Berkley street.	631	589	1902 Sept. 18, 1912.
Public Alley No. 423 .....	Between Commonwealth avenue and Marlborough street, from Berkeley street to Clarendon street.	580	544	1902 Aug. 26, 1912.
Public Alley No. 424 .....	Between Commonwealth avenue and Marlborough street, from Clarendon street to Dartmouth street.	575	539	1902 April 22, 1912.
Public Alley No. 425 † .....	Between Commonwealth avenue and Marlborough street, from Dartmouth street to Exeter street.	555	493	1899
Public Alley No. 426 .....	Between Commonwealth avenue and Marlborough street, from Exeter street to Fairfield street.	624	595	1901 Oct. 16, 1911.
Public Alley No. 428 .....	Between Commonwealth avenue and Marlborough street, from Gloucester street to 205 feet east of Hereford street.	190	193	1901 Oct. 23, 1911.

† See note on page 228.

## List of Streets Paved with Trinidad Asphalt.—Continued.

NAME.	Limits.	Year Laid.	Area, Square Yards.	Guaranty Expires.
NAME.	Length in Feet.			
Public Alley No. 431 †.....	Between Commonwealth avenue and Newbury street, from 205 feet east of Hereford street to 83 feet west of Gloucester street.	107	95	1899
Public Alley No. 437.....	Between Commonwealth avenue and Newbury street, from Berkeley street to Arlington street.	631	561	1898
Public Alley No. 701.....	Between Union Park street and Upton street, from 130 feet east of Tremont street to Shawmut avenue.	521	611	1899
Rutland square.....	At Columbus avenue (crosswalk).....	9	56	1907 Jan. 8, 1917.
St. James avenue.....	At Huntington avenue.....	69	423	1901 Oct. 23, 1911.
Salutation street.....	Hanover street to Commercial street.....	355	268	Sept. 5, 1915.
South Margin street.....	Staniford street, across Norman street.....	192	390	1905 Aug. 12, 1915.
Spring street.....	Poplar street to Leverett street (cobble base).....	447	908	1895
Stevens street.....	Lincoln place, towards Shawmut avenue.....	16	22	1897
Stillman street.....	Endicott street, across North Margin street (cobble base).....	170	453	1892
Stoddard street.....	Howard street to Court street (cobble base).....	135	150	1892
Sun-court street.....	North street to Moon street (cobble base).....	151	218	1891
Temple place.....	Washington street to 95 feet westerly.....	95	318	1906
Temple place †.....	95 feet west of Washington street to Tremont street.....	408	1,303	1900
Thacher street.....	Washington Street North to Endicott street.....	203	562	1892
Tileston street.....	Hanover street, across Unity street.....	412	525	1905 Nov. 23, 1915.
Tileston street.....	Unity street to Salem street.....	163	124	1895

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Tremont street.....	Scollay square to 23 feet north of Beacon street.....	460	1,586	1900
Tremont street.....	21 feet south of Beacon street to Boylston street.....	2,317	8,784	1900
Tremont street.....	At Castle square.....	67	774	1899
Trinity place.....	St. James avenue, across Stuart street.....	391	1,130	1899
Trinity place.....	Stuart street, across Stanhope street.....	262	349	1900
Trinity place.....	Stuart street, across Stanhope street, northerly side.....	.....	408	1907
Union Park street.....	Washington street to Harrison avenue.....	475	1,063	1902
Unity street.....	Charter street to Tileston street.....	330	500	1897
Warrenton street.....	Elliot street to 380 feet south of Elliot street.....	380	1,055	1891
Warrenton street.....	380 feet south of Elliot street to Tremont street (cobble base).....	290	730	1884
Warrenton street.....	Shawmut avenue to Washington street (cobble base).....	468	910	1891
Water street.....	Congress street to Kilby street.....	256	711	1902
Water street.....	Liberty square to Broad street.....	252	682	1896
Wellington street.....	At Columbus avenue (crosswalk).....	9	34	1907
West street.....	At Tremont street (crosswalk).....	22	64	1900
West Canton street.....	At Columbus avenue (crosswalk).....	9	34	1907
West Rutland square.....	At Columbus avenue (crosswalk).....	9	34	1907
West Springfield street.....	At Columbus avenue (crosswalk).....	9	34	1907
Wiget street.....	Salem street to North Margin street.....	259	240	1897
Wiggin street.....	Tileston street to North Bennet street.....	108	120	1905
Winter street.....	At Tremont street (crosswalk).....	17	38	1900
Worcester street....	At Columbus avenue (crosswalk).....	9	34	1907
Yarmouth street.....	At Columbus avenue (crosswalk).....	9	34	1907

† See note on page 228.

‡ See note on page 228.

List of Streets Paved with Trinidad Asphalt.—Continued.  
*East Boston.*

NAME.	Limits.	Length in Feet.	Area, Square Yards.	Year Laid.	Guaranty Expires.
Bennington street.....	Bridge over Boston & Albany Railroad.....	60	507	1906	July 15, 1916.
Curtis street *.....	Bridge over Boston & Albany Railroad.....	41	139	1906	Nov. 21, 1916.
Maverick street *.....	Bridge over Boston & Albany Railroad.....	38	59	1907	Jan. 23, 1917.

*Charlestown.*

Austin street.....	Seminary place to Lawrence street.....	156	451	1891	
Bunker Hill street.....	At Tufts street.....	.....	150	1897	
Charlestown Bridge †.....	Over Fitchburg Railroad.....	61	543	1899	
Corey street.....	124 feet north of Moulton street to Moulton street.....	124	276	1897	
Joiner street.....	Park street to Chelsea street.....	175	447	1906	Sept. 23, 1916.
Moulton street.....	Easterly side of Corey street to Vine street.....	81	243	1897	
Moulton street.....	Vine street to Bunker Hill street.....	130	390	1897	
Tufts street.....	Bunker Hill street to 141 feet northerly.....	141	415	1897	
Vine street.....	Bunker Hill street, across Moulton street.....	165	670	1897	

*South Boston.*

Bolton street.....	C street to D street.....	517	747	1905	Oct. 12, 1915.
D street.....	West Fifth street to Gold street.....	140	513	1889	
Dorchester street.....	Easterly side of Vinton street, in front of Methodist Church.....	.....	190	1904	Oct. 18, 1914.

E street.....	West Third street to Bolton street,.....	111	410	1892
E street.....	West Seventh street to West Eighth street,.....	325	542	1904
I street..	East Broadway to East Fourth street,.....	272	1,027	Oct. 24, 1914.
Rogers street.....	Dorchester street to Preble street (cobble base).....	365	496	June 23, 1913.
West Sixth street.....	C street to D street.....	516	1,490	1891
West Third street.....	153 feet west of E street, across E street,.....	185	689	Oct. 14, 1915.

*Roxbury.*

Boylston street.....	St. Cecilia street to Massachusetts avenue.....	226	790	1904
Cabot street.....	Tremont street to Ruggles street.....	1,236	3,571	Aug. 26, 1914.
Cabot street.....	Easterly side of Ruggles street to Vernon street.....	723	2,988	1891
Cabot street.....	Easterly side of Vernon street to Linden Park street.....	484	1,390	1892
Eustis street.....	138 feet east of Winslow street to 163 feet west of Albany street.....	130	241	1897
Palmer street.....	121 feet east of Winslow street to 201 feet west of Eustis street,.....	134	241	July 31, 1916.
Public Alley No. 404 †.....	Between Huntington avenue and St. Botolph street, from 66 feet south of Cumberland street to Public Alley No. 455.	534	297	July 11, 1916.
Public Alley No. 405 †.....	Rear of northeast side of Massachusetts avenue, from 62 feet west of St. Botolph street to 94 feet east of Huntington avenue.	100	533	1899
Public Alley No. 428.....	Between Commonwealth avenue and Marlborough street, from 205 feet east of Hereford street to Hereford street.	205	89	1899
Public Alley No. 429 †.....	Between Commonwealth avenue and Marlborough street, from 55 feet west of Hereford street to 77 feet east of Massachusetts avenue.	502	186	Oct. 23, 1911.
Public Alley No. 431 †.....	205 feet east of Hereford street to Hereford street,.....	205	502	Nov. 13, 1911.
Roxbury street.....	Easterly side of Guild row to Washington street,.....	170	182	1899
			895	1904

\* See note on page 228.

† See note on page 228.

## List of Streets Paved with Trinidad Asphalt. — Concluded.

NAME.	Limits.	Length in Feet.	Area, Square Yards.	Year Laid.	Guaranty Expires.
Ruggles street.....	Shawnut avenue to Cabot street.....	1,055	3,082	1907	Aug. 23, 1917.
Vernon street.....	80 feet east of Cabot street, across Auburn street.....	693	1,785	1907	Nov. 30, 1917.
Washington street.....	22 feet north of Marvin street, across Zeigler street.....	.....	210	1904	Aug. 12, 1914.

NOTE.—Trinidad asphalt marked thus: \* Guaranteed by E. R. Taylor Company; † Simpson Brothers; ‡ United States Paving Company. Other guarantees are by the Barber Asphalt Company. Unless otherwise marked all asphalt is on a cement concrete base.

## Trinidad Asphalt.

## Summary.

DISTRICT.	UNDER GUARANTY.			NOT UNDER GUARANTY.			DISTRICT. TOTALS.	
	Length. Feet.	Area. Sq. Yds.	Length. Feet.	Area. Sq. Yds.	Length. Feet.	Area. Sq. Yds.		
City Proper.....	28,833	96,585	28,601	70,544	57,434	167,129		
East Boston.....	139	705	.....	.....	139	705		
Charlestown.....	858	447	175	3,138	1,033	3,585		
South Boston.....	1,630	3,996	801	2,118	2,431	6,114		
Roxbury.....	3,146	7,988	3,282	8,753	6,428	16,741		
Totals.....	34,606	109,721	32,859	84,553	67,465	194,274		

## LIST OF STREETS PAVED WITH SICILIAN ROCK ASPHALT, JANUARY 31, 1911.

*City Proper.*

NAME,	Limits,	Length in Feet.	Area, Square Yards.	Year Laid.	Guaranty Expires,
Aeton street.....	Washington street to Bradford street.....	259	352	1896	
Arch street.....	Summer street to Franklin street.....	403	1,522	1901	Oct. 12, 1911.
Avery street.....	79 feet west of Haymarket place to Mason street.....	68	60	1897	
Barton street.....	Leverett street to Milton street.....	403	683	1895	
Beacon street.....	Arlington street to Dartmouth street.....	1,862	9,905	1901	June 14, 1911.
Boylston street.....	Easterly side of Arlington street to Berkeley street.....	681	2,508	1900	
Bradford street.....	Waltham street to Shawmut avenue.....	600	1,270	1897	
Charter street.....	Hanover street 14 feet westerly.....	14	50	1896	
Clark street.....	Hanover street 18 feet easterly.....	18	35	1896	
Cobb street.....	Washington street to Shawmut avenue.....	317	1,041	1897	
Deeatur street.....	Washington street to Harrison avenue.....	370	781	1892	
Dwight street.....	Shawmut avenue to Tremont street.....	716	2,075	1893	
East Concord street.....	From Albany street 12 feet westerly.....	12	45	1897	
Essex place.....	Tuft's street to Essex street.....	202	348	1901	
Exeter place.....	Chauncy street to Harrison avenue.....	170	387	1897	
Fabin street.....	Newland street to Ivanhoe street.....	421	615	1895	
Fay street.....	Dover street to Harrison avenue (cobble base).....	318	560	1894	
Hamburg street.....	Mystic street to Harrison avenue.....	383	597	1896	

## List of Streets Paved with Sicilian Rock Asphalt.—Continued.

NAME.	Limits.	Length in feet.	Area, Square Yards.	Year Laid.	Guaranty Expires.
Hanover street.....	Tileston street, across Charter street (east side).....	.....	323	1896	
Harrison avenue.....	Northampton street to Lenox street.....	427	1,090	1903	May 29, 1913.
Huntington avenue.....	70 feet southerly of Boston & Albany Railroad Bridge to Cumberland street,	1,520	6,635	1896	
India street.....	Milk street to India street (formerly India square).....	565	2,135	1901	Nov. 9, 1911.
Marlborough street.....	Arlington street to Clarendon street.....	1,251	5,004	1901	Aug. 8, 1911.
Mason street.....	West street to 213 feet south of West street.....	209	459	1901	Aug. 15, 1911.
Massachusetts avenue.....	Washington street to Harrison avenue, southerly roadway.....	688	2,030	1894	
Massachusetts avenue.....	Harrison avenue to Albany street, southerly roadway.....	636	1,908	1894	
Massachusetts avenue.....	27 feet south of Marlborough street to Beacon street.....	326	1,557	1901	Nov. 20, 1911.
Mayo street.....	Castle street to Cobb street.....	251	418	1897	
Meander street.....	East Dedham street to Malden street.....	307	437	1896	
Morton street.....	Salem street to Endicott street.....	325	253	1901	Dec. 16, 1911.
Motte street.....	Washington street to Harrison avenue .....	332	516	1899	
Mystic street.....	Malden street to East Dedham street.....	204	226	1896	
Mystic street.....	East Dedham street to East Canton street.....	215	335	1896	
Mystic street.....	East Canton street to East Brookline street.....	216	337	1896	
Newland street.....	West Brookline street to West Newton street.....	336	486	1902	Oct. 15, 1912.
North Margin street.....	Thacher street toward Endicott street.....	205	518	1897	
Norwich street.....	Mystic street to Meander street.....	221	339	1896	

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Ohio street.....	Washington street to Shawmut avenue .....	343	277	1896
Otter street.....	Beacon street to 168 feet north of Beacon street .....	168	523	1901
Pemberton square.....	Front of Suffolk County Courthouse .....	323	1,365	1894
Prince street.....	Hanover street to 293 feet west of Hanover street.....	293	654	1895
* Prince street.....	293 feet west of Hanover street to Salem street.....	213	497	1900
Public Alley No. 12.....	Poplar street to Public Alley No. 14.....	77	68	1903
Public Alley No. 431.....	Between Commonwealth avenue and Newbury street, from Exeter street to Dartmouth street.	555	483	1901
Public Alley No. 436.....	Between Newbury and Boylston streets, from Arlington street to Berkley street.	631	589	1901
Public Alley No. 438.....	Between Newbury and Boylston streets, from Clarendon street to Berkley street.	555	529	1901
Public Alley No. 440.....	Between Newbury and Boylston streets, from Dartmouth street to Exeter street.	622	553	1903
Public Alley No. 441.....	Between Newbury and Boylston streets, from Exeter street to Fairfield street.	351	312	1901
Public Alley No. 442.....	Between Newbury and Boylston streets, from 59 feet west of Fairfield street to 110 feet east of Gloucester street.	1,142	2,235	1901
Salem street.....	Endicott street, across Prince street .....	132	945	1898
Shawmut avenue.....	132 feet south of Castle street, across Cherry street.....	327	945	1898
Stoughton street.....	At Albany street.....	12	45	1897
Taylor street.....	Dwight street to Milford street.....	196	274	1896
Tufts street.....	Kingston street to South street.....	485	985	1901
Tyler street.....	Oak street to Harvard street.....	530	1,413	1901
Whitmore street.....	Kneeland street to Harvard street.....	235	417	1895

\* See note on page 234.

## List of Streets Paved with Sicilian Rock Asphalt—Continued.

*East Boston.*

NAME.	Limits.	Length in Feet.	Area, Square Yards.	Year Laid.	Guaranty Expires.
* Meridian street.....	Trenton street to Eutaw street.....	235	600	1900	

*Charlestown.*

* Lawrence street.....	East side of Lawrence avenue, across Miller street.....	385	1,014	1901	Nov. 18, 1911.
* Miller street.....	Main street to Lawrence street.....	203	383	1901	Nov. 18, 1911.
Warren street.....	Winthrop street, across Soley street.....	128	302	1901	Aug. 22, 1911.

*South Boston.*

Athens street.....	West Second street to A street (bituminous concrete) .....	636	954	1895	
Athens street.....	B street to C street.....	520	751	1892	
* Athens street.....	C street to D street.....	519	750	1901	Aug. 16, 1911.
B street.....	At West Broadway (northerly side).....	11	39	1897	
B street.....	At West Broadway (southerly side).....	10	36	1897	
* Bowen street.....	C street to D street.....	519	750	1901	Oct. 30, 1911
* Bowen street.....	D street to E street.....	523	755	1901	Oct. 30, 1911.
C street.....	At West Broadway (northerly side).....	11	40	1897	
D street.....	At West Broadway (southerly side).....	10	38	1897	
D street.....	At West Broadway (northerly side).....	11	41	1897	
East Broadway.....	Front of Lincoln School .....	180	644	1897	

* Gold street.....	B street to C street.....	524	747	1901	Oct. 10, 1911.
* Gold street.....	C street to D street.....	521	753	1901	Oct. 10, 1911.
K street.....	East Sixth street to East Eighth street.....	566	1,083	1896	
* Silver street.....	B street to C street.....	522	754	1901	Aug. 7, 1911.
* Silver street.....	C street to D street.....	520	751	1901	Aug. 7, 1911.
* Tudor street.....	C street to D street.....	515	744	1901	Oct. 12, 1911.
West Broadway.....	From 196 feet east of easterly line of Dorchester avenue to A street.....	352	1,278	1892	
West Broadway.....	New England Railroad Bridge, across Gardner place (4-foot gutter).....	.....	341	1897	
West Broadway.....	Gardner place to 150 feet easterly.....	150	648	1893	
West Broadway.....	150 feet east of Gardner place to E street (4-foot gutter) .....	.....	1,109	1897	
West Broadway.....	150 feet west of F street to 267 feet east of F street.....	448	1,544	1897	
West Broadway.....	267 feet east of F street to 28 feet west of Dorchester street.....	410	1,818	1898	

*Roxbury.*

Commonwealth avenue.....	Easterly side of Massachusetts avenue to westerly side of Massachusetts avenue.	43	936	1901	Nov. 20, 1911.
Dudley street.....	Easterly side, between Dunmore street and Magazine street.....	.....	350	1902	Nov. 1, 1912.
Falmouth street.....	At Massachusetts avenue (crosswalk) .....	6	25	1901	Nov. 20, 1911.
Huntington avenue.....	Northerly side of Cumberland street to Massachusetts avenue.....	747	4,150	1896	
Huntington avenue.....	Massachusetts avenue to Gainsborough street.....	587	3,372	1896	
Ipswich street.....	Bridge over waterway.....	61	267	1898	
Massachusetts avenue.....	Huntington avenue to south side of Commonwealth avenue.....	2,148	10,159	1901	Nov. 20, 1911.
Massachusetts avenue.....	North side of Commonwealth avenue to 27 feet south of Marlborough street, Boylston street and Westland entrance, between Hemmenway street and the Fenway.	253	1,195	1901	Nov. 20, 1911.
Public Alley No. 901.....		573	550	1902	Nov. 6, 1912.

\* See note on page 234.

*List of Streets Paved with Sicilian Rock Asphalt.—Concluded.  
Brighton.*

NAME.	Limits.			Length in Feet.	Area, Square Yards.	Year Laid.	Guaranty Expires.
		UNDER GUARANTY.	NOT UNDER GUARANTY.				
Brooks street.....	Bridge (over center roadway) .....	.....	.....	130	1902	May 17, 1912.	
Commonwealth avenue.....	Cottage Farm Bridge (over Boston & Albany Railroad) .....	140	1,556	1896			

Note.—Sicilian rock asphalt marked \* guaranteed by Jones & Meehan. Sicilian rock asphalt having guaranty and not otherwise designated is guaranteed by the Boston Asphalt Company. All Sicilian rock asphalt not otherwise marked is laid on a cement concrete base.

**Sicilian Rock Asphalt.**

*Summary.*

District.				Length, Feet.	Area, Sq. Yds.	Length, Feet.	Area, Sq. Yds.
	UNDER GUARANTY.	NOT UNDER GUARANTY.	DISTRICT TOTALS.				
City Proper.....	11,602	31,053	11,517	29,555	23,119	60,608	
East Boston.....	.....	1,699	235	600	235	600	
Charlestown.....	716	.....	.....	.....	716	1,699	
South Boston.....	4,163	6,004	3,315	10,364	7,478	16,368	
Roxbury.....	3,023	13,215	1,395	7,789	4,418	21,004	
Brighton.....	.....	130	140	1,556	140	1,686	
Totals.....	19,504	52,101	16,602	49,864	36,106	101,965	

LIST OF STREETS PAVED WITH SEYSEL ROCK ASPHALT, JANUARY 31, 1911.

NAME.	Limits.	Length in Feet.	Area, Square Yards.	Year Laid.	Guaranty Expires.
Genesee street.....	Harrison avenue to Albany street.....	505	1,122	1899	
Mason street.....	22 feet north of Avery street to Avery street.....	22	55	1899	
Milton street.....	Brighton street to Spring street.....	305	274	1899	
Oswego street.....	Harrison avenue to Albany street.....	506	1,068	1899	
Paul street.....	Emerald street to Village street.....	133	236	1897	
Paul street.....	Village street to Tremont street.....	276	456	1897-99	
Pelham street.....	Washington street to Shawmut avenue.....	320	693	1897	
Public Alley No. 102.....	23 feet south of Marshall street to Creek square.....	182	184	1899	
Public Alley No. 702.....	Worcester street to West Springfield street.....	222	222	1899	
Public Alley No. 703.....	Newland street to Public Alley No. 702.....	116	103	1899	
Watford street.....	Washington street to Shawmut avenue.....	316	544	1897	

Note.— All Seysel rock asphalt is laid on a cement concrete base.

LIST OF STREETS PAVED WITH BERMUDEZ ASPHALT, JANUARY 31, 1911.  
*City Proper.*

NAME.	Limits.	Length in Feet.	Area, Square Yards.	Year Laid.	Guaranty Expires.
Camden street.....	At Columbus avenue (crosswalk) east and west.....	18	68	1907	Jan. 4, 1917.
Columbus avenue.....	Northerly side of Camden street to 301 feet south of Camden street.....	335	1,340	1907	Jan. 4, 1917.

*Roxbury.*

Benton street .....	At Columbus avenue (crosswalk) .....	27	69	1907	Jan. 4, 1917.
Burke street.....	At Columbus avenue (crosswalk) .....	26	66	1907	Jan. 4, 1917.
Columbus avenue.....	301 feet south of Camden street to 67 feet north of Station street.....	3,511	14,239	1907	Jan. 4, 1917.
Cunard street.....	At Columbus avenue (crosswalk) .....	16	60	1907	Jan. 4, 1917.
Davenport street.....	At Columbus avenue (crosswalk) .....	26	66	1907	Jan. 4, 1917.
Riverside street.....	At Columbus avenue (crosswalk) .....	9	21	1907	Jan. 4, 1917.
Sarsfield street.....	At Columbus avenue (crosswalk) .....	18	40	1907	Jan. 4, 1917.
Walpole street.....	At Columbus avenue (crosswalk), east and west.....	18	46	1907	Jan. 4, 1917.
Weston street.....	At Columbus avenue (crosswalk) .....	9	20	1907	Jan. 4, 1917.
Whittier street.....	At Columbus avenue (crosswalk) .....	5	25	1907	Jan. 4, 1917.

NOTE.—Bermudez asphalt guaranteed by the Boston Asphalt Company. All Bermudez asphalt is laid on a cement concrete base.

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 LIST OF STREETS PAVED WITH ACME ASPHALT, JANUARY 31, 1911.  
*City Proper.*

NAME.	LIMITS.	Length in Feet.	Area, Square Yards.	Year Laid.	Guaranty Expires.
Ash street.....	Nassau street to Oak street.....	216	379	1909	July 24, 1914.
Corning street.....	Shawmut avenue to Washington street.....	338	734	1908	Nov. 25, 1918.
Harrison avenue.....	Malden street, across East Dedham street.....	382	918	1909	Oct. 16, 1914.
Kirkland street.....	Pleasant street to Corning street.....	394	566	1909	Sept. 30, 1914.
Massachusetts avenue.....	Columbus avenue to Tremont street, southerly roadway.....	532	1,690	1910	Dec. 7, 1915.
Massachusetts avenue.....	Tremont street to Shawmut avenue, southerly roadway.....	921	2,946	1910	Dec. 7, 1915.
Massachusetts avenue.....	Shawmut avenue to Washington street, southerly roadway.....	341	1,008	1910	Dec. 7, 1915.
Nassau street.....	At Ash street (crosswalk).....	7	15	1909	July 24, 1914.
Parkman street.....	Blossom street to North Russell street.....	230	479	1910	Sept. 17, 1915.
Wheeler street.....	Shawmut avenue to Corning street.....	379	645	1909	Oet. 1, 1914.
<i>East Boston.</i>					
* Porter street.....	Bridge over Boston & Albany Railroad.....	* 37	128	1907	Oet. 19, 1917.
* Prescott street.....	Bridge over Boston & Albany Railroad.....	36	125	1907	Oct. 19, 1917.
* Saratoga street.....	Bridge over Boston & Albany Railroad.....	95	180	1907	Sept. 16, 1917.
<i>Roxbury.</i>					
Massachusetts avenue.....	Boylston street to Newbury street .....	188	710	1909	May 24, 1914.

\* Guaranteed by W. A. Mulfeldt Company, otherwise by the Warren Brothers Company. All Aeme asphalt laid on a cement concrete base.

## LIST OF STREETS PAVED WITH AMERICAN ROCK ASPHALT, JANUARY 31, 1911.

NAME.	Limits.	Length in Feet.	Area, Square Yards.	Year Laid.	Guaranty Expires.
Batterymarch street (City Proper).....	Milk street to 93 feet west of Atlantic avenue (block paving).....	213	680	1909	May 21, 1914.
Beacon street (City Proper).....	Northerly side of Brimmer street, across Arlington street.....	358	1,486	1908	July 3, 1918.
K street (South Boston).....	East Fourth street, across East Sixth street.....	600	2,113	1906	Sept. 14, 1916.
Kilby street (City Proper).....	East side from Milk street, across Central street.....	.....	1,520	1908	Aug. 31, 1918.

Note.—American rock asphalt guaranteed by Jones & Meehan. Unless otherwise marked all American rock asphalt is laid on a cement concrete base.

## LIST OF STREETS PAVED WITH LIMMER ROCK ASPHALT.

NAME.	Limits.	Length in Feet.	Area, Square Yards.	Year Laid.	Guaranty Expires.
Mt. Vernon street (City Proper).....	Archway under State House.....	164	455	1897	
Sumner street (East Boston).....	Bridge over Boston & Albany Railroad.....	38	187	1908	June 25, 1918.

Note.—Limmer rock asphalt guaranteed by W. A. Murfield Company. All Limmer rock asphalt is laid on a cement concrete base.

## Summary of all Asphalts.

KIND.	UNDER GUARANTY.			NOT UNDER GUARANTY.			TOTALS.		
	Length. Feet,	Area. Sq. Yds.	Length. Feet.	Area. Sq. Yds.	Length. Feet.	Miles.	Area. Sq. Yds.		
Trinidad.....	34,606	109,721	32,859	81,553	67,465	12.78	194,274		
Sicilian rock.....	19,504	52,101	16,602	49,804	36,106	.84	101,965		
Seyssel rock.....	.....	.....	2,906	4,957	2,906	.55	4,957		
Bermudez.....	4,018	16,060	.....	.....	4,018	.76	16,060		
Aene.....	4,096	10,523	.....	.....	4,096	.78	10,523		
American rock.....	1,171	5,799	.....	.....	1,171	.22	5,799		
Limner rock.....	38	187	164	455	202	.03	642		
Totals.....	63,433	194,391	52,531	139,829	115,964	21.96	334,220		

LIST OF STREETS PAVED WITH BITULITHIC, JANUARY 31, 1911.  
*City Proper.*

NAME.	LIMITS.	Length in Feet.	Area, Square Yards.	Year Laid.	Guaranty Expires.
Albany street.....	Northerly side of Stoughton street, across East Concord street (laid on existing concrete base).	309	1,854	1905	Dec. 2, 1915.
Albany street.....	225 feet north of Massachusetts avenue to Massachusetts avenue.....	225	1,350	1905	Nov. 3, 1915.
Allen street.....	Charles street to Chambers street.....	1,297	3,556	1905	Sept. 9, 1915.
Ashburton place.....	Somerset street to 55 feet east of Bowdoin street.....	285	682	1904	Aug. 17, 1914.
Belvidre street.....	West Newton street to 195 feet west of Falmouth street.....	317	1,116	1903	April 25, 1913.
Berkeley street.....	Boylston street to Commonwealth avenue.....	582	2,587	1903	May 22, 1913.
Berkeley street.....	Commonwealth avenue to Marlborough street.....	280	1,245	1903	May 22, 1913.
Berkeley street.....	Marlborough street to Beacon street.....	264	1,173	1903	May 22, 1913.
Berkley street.....	Tremont street to Columbus avenue .....	1,195	4,663	1906	Dec. 14, 1916.
Bowdoin street.....	Ashburton place to Cambridge street.....	854	2,259	1902	Oct. 23, 1912.
Boylston street.....	Dartmouth street to 205 feet east of Hereford street.....	1,999	7,152	1904	Nov. 18, 1914.
Clarendon street.....	Boylston street to Commonwealth avenue .....	582	2,336	1905	Aug. 21, 1915.
Clarendon street.....	Commonwealth avenue to Beacon street.....	580	2,320	1905	Aug. 21, 1915.
Dartmouth street.....	Southerly side of Newbury street to Commonwealth avenue.....	326	2,536	1903	July 13, 1913.
Dartmouth street.....	Commonwealth avenue to Beacon street.....	579	4,503	1903	July 13, 1913.
Derne street.....	At Hancock street (crosswalk) .....	5	30	1902	Nov. 15, 1912.
Emerald street.....	Castle street to Dover street.....	912	2,639	1904	July 27, 1914.
Florence street.....	Washington street to Harrison avenue.....	352	704	1906	Sept. 8, 1916.

Garden Court street.....	North square to Fleet street.....	233	377	1906	Oct. 23, 1916.
Hancock street.....	Mt. Vernon street to Myrtle street.....	317	816	1902	July 17, 1912.
Hancock street.....	Myrtle street to Cambridge street.....	646	1,702	1902	Nov. 15, 1912.
Harrison avenue.....	North side of East Springfield street to Northampton street.....	508	1,174	1905	Nov. 24, 1915.
Huntington avenue.....	9 feet south of Dartmouth street to bridge over B. & A. R. R.....	696	3,941	1906	Sept. 15, 1916.
Mason street.....	213 feet south of West street to 449 feet south of West street.....	236	480	1907	June 1, 1917.
Massachusetts avenue.....	Southerly side of Beacon street to Harvard Bridge.....	237	1,080	1902	Nov. 22, 1912.
Massachusetts avenue.....	Columbus avenue to Providence Division, N. Y., N. H. & H. R. R.....	469	2,248	1903	Aug. 11, 1913.
Massachusetts avenue.....	Columbus avenue to Tremont street (northerly roadway), laid on existing concrete base.	.....	1,606	1907	June 13, 1917.
McLean street.....	Chambers street to Blossom street.....	518	1,345	1905	July 20, 1915.
Moon street.....	Lewis street to Fleet street.....	107	203	1906	Oct. 13, 1916.
North square.....	North street to Moon street.....	239	1,250	1906	Dec. 24, 1916.
Oneida street.....	Harrison avenue to Albany street.....	508	1,072	1903	Aug. 22, 1913.
Prince street.....	Garden Court street to Hanover street.....	134	223	1906	Oct. 23, 1916.
Tyler street.....	Beach street to Kneeland street.....	320	853	1905	Oct. 23, 1915.
Tyler street.....	Kneeland street to Harvard street.....	332	885	1905	Oct. 23, 1915.
Tyler street.....	Oak street to Curve street.....	441	1,187	1905	Oct. 23, 1915.
West Newton street.....	Columbus avenue to Huntington avenue.....	1,044	3,944	1903	July 3, 1913.
West Newton street.....	Huntington avenue across Belvidere street.....	262	990	1903	April 25, 1913.
West Newton street.....	Tremont street to Columbus avenue.....	790	3,196	1904	Aug. 13, 1914.
<i>East Boston.</i>					
Maverick street.....	London street to Havre street.....	180	620	1903	June 2, 1913.

List of Streets Paved with Bitulithic.—Concluded.  
South Boston.

NAME.	Limits.	Length in Feet.	Area, Square Yards.	Year Laid.	Guaranty Expires.
Bowen street.....	E street to F street.....	515	744	1903	May 22, 1913.
Dorchester street.....	Broadway to Eighth street (minus intersection at Fourth street, Fifth street and Eighth street).	1,324	5,865	1905	Sept. 20, 1915.
E street.....	South side of West Fourth street to West Broadway.....	333	1,221	1903	June 2, 1913.
G street.....	110 feet north of East Sixth street to 178 feet north of East Seventh street,	230	828	1905	July 3, 1915.
Silver street.....	A street to B street.....	500	750	1903	June 4, 1913.
Silver street.....	225 feet west of E street to E street.....	225	325	1903	June 2, 1913.
Thomas park.....	Around Telegraph hill.....	2,056	7,042	1905	July 3, 1915.
West Broadway.....	Intersection of Dorchester street.....	87	250	1905	Sept. 20, 1915.
West Fourth street.....	E street to 207 feet west of E street.....	207	759	1903	June 2, 1913.
<i>Roxbury.</i>					
Albany street.....	Hampden street to Eustis street.....	1,613	4,900	1907	Aug. 3, 1917.
Belvidere street.....	Massachusetts avenue to 195 feet west of Falmouth street.....	1,021	2,949	1903	April 25, 1913.
Blue Hill avenue.....	Dewey street to north side of Savin street.....	598	1,528	1906	Nov. 16, 1916.
Blue Hill avenue.....	Brunswick street to northerly side of Devon street.....	199	509	1906	Dec. 7, 1916.
Boylston street.....	205 feet east of Hereford street to 8 feet east of Hereford street.....	197	677	1904	Nov. 18, 1914.
Boylston street.....	Massachusetts avenue to westerly line of Hemenway street.....	390	1,414	1905	Sept. 2, 1915.
Dacia street.....	Northerly side of Woodcliff street, across Dove street.....	290	838	1906	Oct. 2, 1916.

Dearborn street.....	At Albany street.....	.....	56	220	1907	Aug. 3, 1917.
Gainsborough street.....	Huntington avenue to Providence Division, N. Y., N. H. & H. R. R. ....	.....	550	2,078	1903	July 17, 1913.
Massachusetts avenue.....	Providence Division, N. Y., N. H. & H. R. R., to Huntington avenue.....	.....	561	2,150	1903	Aug. 11, 1913.
Roxbury street.....	Shawmut avenue to Kent street.....	.....	557	2,160	1904	Sept. 21, 1914.
St. Alphonsus street.....	Tremont street to northerly side of Smith street.....	.....	524	1,514	1905	Sept. 9, 1915.
Smith street.....	St. Alphonsus street to Phillips street.....	.....	585	1,690	1904	July 9, 1914.
Tremont street.....	St. Alphonsus street to Phillips street.....	.....	587	1,854	1902	Dec. 11, 1912.
Woodcliff street.....	Dacia street to Blue Hill avenue.....	.....	309	893	1906	Oct. 2, 1916.

NOTE.— Bitulithic is guaranteed by Warren Brothers Company.

#### Summary of Bitulithic.

District.	Length. Feet.	Area. Square Yards.
City proper.....	18,980	71,277
East Boston.....	180	620
South Boston.....	5,477	17,784
Roxbury.....	8,037	25,374
<b>Totals.....</b>	<b>32,674</b>	<b>115,055</b>

LIST OF STREETS PAVED WITH WOOD BLOCKS, JANUARY 31, 1911.  
*City Proper.*

NAME.	Limits.	Length in Feet.			Area, Square Yards.	Year Laid.	Guaranty Expires.
		452	1,996	1906			
Atlantic avenue.....	811 feet south of Kneeland street to 1,263 feet south of Kneeland street (bridge).	12	8	1906	Nov. 23, 1916.		
Avery street.....	At Washington street (crossing).....	9	20	1906	Nov. 23, 1916.		
Avon street.....	At Washington street (crossing).....	1,527	8,145	1901	Oct. 7, 1911.		
Beacon street.....	Massachusetts avenue to Raleigh street.....	433	1,690	1901	"		
Boylston street.....	Boylston place across Charles street.....	30	243	1901			
Charles street.....	At Boylston street.....	153	532	1908	Nov. 9, 1918.		
Church street.....	Boylston street to Providence street.....	9	8	1908	Nov. 21, 1918.		
† Cornhill court.....	At Washington street (crossing).....	9	27	1908	Nov. 21, 1918.		
† Court street.....	At Washington street (crossing).....	163	800	1907	Nov. 30, 1917.		
Eliot street.....	East side Pleasant street to Columbus avenue.....	978	5,542	1901	Dec. 1, 1911.		
Harvard Bridge.....	Southerly abutment to center of draw (plank base).....	408	861	1910	July 28, 1915.		
§ Harvard street.....	Washington street to Harrison avenue.....	9	20	1906	Nov. 23, 1916.		
Hayward place.....	Washington street to 9 feet easterly (crossing).....	6	70	1910	Aug. 15, 1915.		
† Kilby street.....	At Milk street (crossing) .....	6	14	1908	Sept. 19, 1918.		
Mason street.....	At West street (crossing) .....	300	1,156	1910	Aug. 16, 1915.		
† Milk street.....	Pearl street across Oliver street .....	750	3,000	1901	Nov. 12, 1911.		
Newbury street.....	Fairfield street to 205 feet east of Hereford street.....	152	591	1910	Aug. 16, 1915.		
† Oliver street.....	From Milk street to 152 feet southerly .....	482	4,100	1907	Nov. 30, 1917.		
Park square.....	Boylston street to south side of Eliot street.....						

Pearl street.....	From Milk street to 153 feet southerly.....	153	508	1910	Aug. 16, 1915.
Pleasant street.....	Elliot street to Park square.....	93	425	1907	Nov. 30, 1917.
Providence street.....	134 feet east of Church street to Park square.....	141	725	1907	Nov. 30, 1917.
Providence street.....	134 feet east of Church street, across Church street.....	165	512	1908	Nov. 10, 1918.
* Public Alley No. 412.....	Between Newbury street and Roylston street, from Gloucester street to 110 feet east of Gloucester street.....	110	98	1901	Nov. 29, 1911.
† State street.....	Washington street to Devonshire street.....	115	530	1908	Dec. 4, 1918.
Summer street.....	Washington street to Hawley street.....	234	990	1908	Oct. 17, 1918.
Tremont street.....	23 feet north of Beacon street to 21 feet south of Beacon street.....	65	231	1900	
Tremont street.....	18 feet north of Park street to southerly street line of Temple place (on the westerly side),	.....	1,064	1900	
Washington street.....	Milk street to Beach street.....	2,279	8,660	1906	Nov. 23, 1916.
† Washington street.....	Corahill to 78 feet south of Court avenue.....	509	1,475	1908	Nov. 21, 1918.
Washington street.....	South side Milk street to 78 feet south of Court avenue.....	538	1,860	1907	June 26, 1917.
Water street.....	Devonshire street to Congress street.....	213	956	1907	July 12, 1917.
West street.....	Washington street to Tremont street.....	463	1,126	1908	Sept. 19, 1918.
§ Whitmore street.....	At Harvard street (crossing) .....	6	10	1910	July 28, 1915.
<hr/>					
<i>Roxbury.</i>					
Falmouth street.....	Norway street to Massachusetts avenue.....	634	2,433	1909	July 31, 1914.
Massachusetts avenue.....	Bridge over Boston & Albany Railroad.....	75	500	1908	
Newbury street.....	205 feet east of Hereford street to Hereford street.....	205	820	1901	Nov. 12, 1911.
† Newbury street.....	Easternly side of Hereford street to Massachusetts avenue .....	705	2,820	1903	Oct. 7, 1913.
Norway street.....	Falmouth street to St. Paul street.....	307	917	1909	Aug. 28, 1914.
St. Paul street.....	Falmouth street to Norway street .....	299	777	1909	Aug. 23, 1914.

List of Streets Paved with Wood Blocks.—Concluded.  
Dorchester.

NAME.	LIMITS.			Length in Feet.	Area, Square Yards.	Year Laid.	Guaranty Expires.
		UNDER GUARANTY.	NOT UNDER GUARANTY.				
Bowdoin street.....	East side of Quincy street to 78 feet west of Mt. Ida road.....	386	1,885	1909	Sept. 11, 1914.		
Washington street.....	Moultrie street to Centre street.....	182	850	1907	Aug. 15, 1917.		

Note.—Wooden block pavement not otherwise marked is guaranteed by the United States Wood Preserving Company. Marked thus \* is guaranteed by Boston Asphalt Company; thus † is guaranteed by James Doherty; thus ‡ is guaranteed by Patrick McGovern; thus § is guaranteed by J. H. McCarthy. All wooden block pavements are on cement concrete base unless otherwise marked.

Summary of Wood Block.

DISTRICT.			Length. Feet.	Area. Sq. Yds.	TOTALS.	
	UNDER GUARANTY.	NOT UNDER GUARANTY.			Length. Feet.	Area. Sq. Yds.
City proper.....	9,992	42,769	980	5,224	10,972	47,993
Roxbury.....	2,150	7,767	75	500	2,225	8,267
Dorchester.....	568	2,735	.....	.....	568	2,735
Totals.....	12,710	53,271	1,055	5,724	13,765	58,995

## LIST OF STREETS WITH CEMENT PAVEMENT, JANUARY 31, 1911.

NAME.	Limits.	Length in Feet.	Area, Square Yards.	Year Laid.	Guaranty Expires.
* Main street (Charlestown).....	Bridge over Boston & Maine Railroad to Somerville line .....	139	672	1906	Dec. 8, 1911.
* Rochester street (city proper).....	Harrison avenue to Albany street.....	508	1,129	1907	Nov. 23, 1912.
† Zeigler street (Roxbury).....	Washington street to Warren street.....	315	946	1908	Nov. 18, 1913.

Cement pavement marked thus \* guaranteed by Simpson Brothers Corporation; thus † guaranteed by R. S. Blome Company.

LIST OF STREETS WITH BRICK BLOCK PAVEMENT HAVING A MAINTENANCE GUARANTY,  
JANUARY 31, 1911.

NAME.	District.	Limits.	Length in Feet.	Area, Square Yards.	Year Laid.	Guaranty Expires.
Adams street.....	Roxbury.....	At Dudley street (crossing).....	7	20	1910	Nov. 25, 1915.
Bickford street.....	Roxbury.....	At Heath street (crossing).....	8	23	1910	Nov. 26, 1915.
Blue Hill avenue.....	Roxbury.....	At Dudley street (crossing).....	9	41	1910	Nov. 25, 1915.
Damrell street.....	South Boston.....	Dorchester avenue to Ames street.....	571	1,650	1910	Oct. 15, 1915.
Day street.....	Roxbury.....	At Heath street (crossing).....	5	36	1910	Nov. 26, 1915.
Dearborn street.....	Roxbury.....	At Dudley street (crossing).....	27	176	1910	Nov. 25, 1915.
Derne street.....	City proper.....	Temple street to Hancock street.....	205	610	1909	Nov. 30, 1914.

## List of Streets with Brick Block Pavement Having a Maintenance Guaranty, January 31, 1911.—Concluded.

NAME.	District.	Limits.	Length in Feet.	Area, Square Yards.	Year Laid.	Guaranty Expires.
Downing street.....	Roxbury.....	Whittier street to Vernon street.....	323	750	1909	Dec. 21, 1914.
Dudley street.....	Roxbury.....	Harrison avenue to Magazine street.....	2,686	10,805	1910	Nov. 25, 1915.
Dunmore street.....	Roxbury.....	At Dudley street .....	57	135	1910	Nov. 25, 1915.
Greenville street.....	Roxbury.....	At Dudley street (crossing) .....	8	20	1910	Nov. 25, 1915.
Hampshire street.....	Roxbury.....	Ruggles street to Whittier street .....	362	1,050	1909	Dec. 21, 1914.
Hampshire street.....	Roxbury.....	Whittier street to Vernon street.....	364	1,055	1909	Dec. 21, 1914.
Hampshire street.....	Roxbury.....	Vernon street to Linden Park street.....	645	1,864	1909	Dec. 21, 1914.
Hancock street.....	Dorchester.....	Columbia road across Bowdoin street.....	2,009	6,842	1910	Unfinished.
Heath street.....	Roxbury.....	Parker street to Huntington avenue.....	3,045	12,627	1910	Nov. 26, 1915.
Huntington avenue....	City proper.....	Bridge over Boston & Albany Railroad .....	92	767	1909	Dec. 15, 1914.
Lawn street.....	Roxbury.....	At Heath street (crossing) .....	16	55	1910	Nov. 26, 1915.
Linden Park street....	Roxbury.....	Easterly side of Cabot street to Elmwood street.....	1,015	3,242	1909	Dec. 21, 1914.
Longwood avenue....	Roxbury.....	51 feet north of Huntington avenue to 9 feet south of Brookline avenue.....	2,078	7,850	1910	Oct. 8, 1915.
Magazine street.....	Roxbury.....	At Dudley street (crossing) .....	10	30	1910	Nov. 25, 1915.
Mt. Pleasant avenue..	Roxbury.....	At Dudley street (crossings east and west) .....	21	73	1910	Nov. 25, 1915.
Ruggles street.....	Roxbury.....	Cabot street to Tremont street .....	460	1,874	1909	Dec. 21, 1914.
Schiller street.....	Roxbury.....	At Heath street (crossing) .....	8	25	1910	Nov. 26, 1915.
Simmons street.....	Roxbury.....	Vernon street to Linden Park street .....	645	1,434	1909	Dec. 21, 1914.
Vernon street.....	Roxbury.....	Cabot street to Tremont street .....	800	2,533	1909	Dec. 21, 1914.

Vine street.....	Roxbury.....	At Dudley street (crossing).....	7	20	Nov. 25, 1915.
Walden street.....	Roxbury.....	At Heath street (crossing).....	8	18	Nov. 26, 1915.
Wensley street.....	Roxbury.....	At Heath street (crossing).....	8	53	Nov. 26, 1915.
Whittier street.....	Roxbury.....	Cabot street to Tremont street.....	637	1,877	Dec. 21, 1914.
Whittier street.....	Roxbury.....	Tremont street to Columbus avenue.....	208	786	1909
Whittier street.....	Roxbury.....	At Longwood avenue (crossing).....	8	23	1910
Wigglesworth street...	Roxbury.....	At Dudley street (crossing).....	8	23	Nov. 25, 1915.
Winslow street.....	Roxbury.....	At Longwood avenue (crossing).....	16	46	Oct. 8, 1915.
Worthington street....	Roxbury.....				

Note.—Brick block pavement is laid on a cement concrete base.

#### Summary of all Smooth Pavements.

KIND.	Length. Feet.	Length. Miles.	Area. Sq. Yds.
Asphalt.....	115,964	21.96	331,220
Bitulithic.....	32,674	6.19	115,055
Wood block.....	13,765	2.61	58,995
Cement.....	962	.18	2,747
* Brick.....	16,376	3.10	58,433
Totals.....	179,741	34.04	569,450

\* Note.—This table contains only brick pavement under guaranty.

LIST OF CONTRACTS FROM FEBRUARY 1, 1910, TO JANUARY 31, 1911, MADE BY THE STREET  
DEPARTMENT.

Paving with Wood Blocks.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1910.
Milk street, between Pearl and Oliver streets; Pearl street, from Milk street, about 148 feet southerly; Oliver street, from Milk street about 153 feet southerly.	James Doherty.....	May 28, 1910.	Completed Aug. 16, 1910. (A) 2,300 square yards @ \$2.70 (B) 330 cubic yards @ 4.53 (C) 170 square yards @ 0.99 (D) 2,300 square yards @ 0.33 (H) 30 square yards @ 1.05	\$6,210.00 1,494.90 168.30 759.00 31.50	\$10,259.53
Harvard street, between Washington street and Harrison avenue.	J. H. McCarthy.....	June 25, 1910.	Completed July 28, 1910. (A) 900 square yards @ \$2.67 (B) 910 square yards @ 0.78 (C) 10 square yards @ 1.00 (D) 910 square yards @ 0.15 (E) 220 linear feet @ 0.15 (F) 110 square yards @ 0.25 (G) 10 square yards @ 0.50 (H) 10 square yards @ 1.00 (J) 10 square yards @ 0.50	\$2,403.00 709.80 10.00 136.50 33.00 27.50 5.00 10.00 5.00	\$8,663.70

<sup>1</sup> Advertised and awarded to lowest bidder.

EXPLANATION OF LETTERS.

- (A) Furnishing and laying wood block paving and guaranteeing same for a period of five (5) years after completion.
- (B) Concrete base for wood block paving with pitch joints.
- (C) Granite block paving with pitch joints.
- (D) Preparing site.
- (E) Excavating and setting edgestones.
- (F) Excavating and relaying brick sidewalks.
- (G) Granite block paving with gravel joints.
- (H) Flazing crosswalks with pitch joints.
- (I) Flagging crosswalks with gravel joints.

## STREET DEPARTMENT — HIGHWAY DIVISION. 251

## Paving with Brick Block.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1910.
1 Heath street, between South Huntington avenue and Parker street.	Field, Barker & Underwood, Inc.	June 27, 1910.	Completed Dec. 9, 1910.	(A) 13,300 square yards @ \$2 53 \$33,649 00 (C) 70 square yards @ 1 90 133 00 (E) 40 square yards @ 0 50 20 00 (G) 10 square yards @ 1 80 18 00 (M) 5,100 linear feet @ 0 10 510 00 (N) 970 linear feet @ 0 95 921 50 (O) 75 linear feet @ 0 15 11 25 (R) 100 square yards @ 0 25 25 00 (S) 1,000 square yards @ 0 25 250 00	\$35,637 75
1 Longwood avenue, between Huntington avenue and Brookline avenue.	Field, Barker & Underwood, Inc.	June 27, 1910.	Completed Oct. 8, 1910.	(A) 5,700 square yards @ \$2 59 \$14,763 00 (C) 30 square yards @ 1 90 57 00 (D) 120 square yards @ 1 90 228 00 (E) 10 square yards @ 0 50 5 00 (H) 5 square yards @ 1 80 9 00 (J) 20 square yards @ 1 90 38 00 (M) 2,900 linear feet @ 0 10 296 00 (P) 50 linear feet @ 0 18 9 00 (Q) 110 linear feet @ 0 15 16 50 (R) 300 square yards @ 0 25 75 00 (S) 760 square yards @ 0 25 190 00	\$35,987 71
1 Dudley street, between Warren and Magazine streets.	James Doherty.....	July 22, 1910.	Completed Nov. 26, 1910.	(A) 9,200 square yards @ \$2 59 \$23,828 00 (C) 120 square yards @ 1 40 168 00 (E) 90 square yards @ 0 45 40 50 (G) 70 square yards @ 1 30 91 00 (I) 10 square yards @ 0 50 5 00 (M) 4,660 linear feet @ 0 11 512 60 (S) 3,360 square yards @ 0 27 907 20	\$15,886 50
1 Geneva avenue, between Bowdoin and Park streets.	Central Construction Company.	July 22, 1910.	Cancelled Aug. 25, 1910.	(A) 9,000 square yards @ \$2 57 \$23,130 00 (C) 130 square yards @ 1 50 195 00 (E) 50 square yards @ 0 50 25 00 (H) 20 square yards @ 1 30 30 00 (M) 1,270 linear feet @ 0 11 139 70 (S) 170 square yards @ 0 28 47 60	\$24,798 91
					\$23,567 30

1 Advertised and awarded to lowest bidder.

Paving with Brick Block.—Concluded.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1910.
*1 Damrell street, between Dorchester and Old Colony avenues.	Central Construction Company.	Aug. 19, 1910.	Completed Nov. 30, 1910.	(B) 1,740 square yards @ 2 45 (D) 20 square yards @ 0 60 (E) 200 square yards @ 0 50 (F) 1,270 square yards @ 0 55 (G) 50 square yards @ 0 55 (H) 630 cubic yards @ 0 60 (I) 2,500 cubic yards @ 0 40 (M) 80 linear feet @ 0 25 (N) 1,800 linear feet @ 0 15 (O) 1,500 linear feet @ 0 93 (P) 1,300 square yards @ 0 28 (S) 60 square yards @ 0 28 (T) preparing site 1 00	\$4,263 00 100 00 698 50 30 00 252 00 625 00 12 00 1,674 00 199 50 364 00 16 80  \$8,410 54
Hancock street, between Columbia road and Winter street.	Central Construction Company.	Aug. 31, 1910.	Unfinished.	(A) 9,300 square yards @ \$2 57 (C) 60 square yards @ 1 50 (E) 70 square yards @ 0 50 (G) 10 square yards @ 1 50 (M) 2,400 linear feet @ 0 11 (S) 60 square yards @ 0 28	\$23,901 00 90 00 35 00 15 00 264 00 16 80  \$24,321 80

<sup>1</sup> Advertised and awarded to lowest bidder.

\* Constructed under chapter 323 of Acts of 1891 or special acts or amendments thereto.

EXPLANATION OF LETTERS.

(A) Furnishing and laying brick block paving, including preparing site, concrete base, and guaranteeing same for a period of five (5) years after completion.

(B) Furnishing and laying brick block paving, including concrete base, and guaranteeing same for a period of five (5) years after completion.

(C) Laying granite block paving with grout joints, including preparing site and concrete base.

(D) Laying granite block paving with grout joints, including hauling same, preparing site and concrete base.

(E) Relaying granite block paving with gravel joints.

(F) Laying granite block paving with gravel joints, including hauling same.

(G) Relaying flagging crosswalks with grout joints, including preparing site and concrete base.

(H) Relaying flagging crosswalks with gravel joints, including hauling same, preparing site and concrete base.

(I) Laying flagging crosswalks with grout joints, including hauling same, preparing site and concrete base.

(J) Excavation.

(K) Filling furnished and placed.

(L) Resetting edgestone.

(M) Straight edgestone furnished and set.

(N) Circular edgestone furnished and set.

(O) Edgestone hauled and set.

(P) Circular edgestone reset.

(Q) Laying brick sidewalk.

(R) Relaying brick sidewalk.

(S) Preparing site.

(T) Laying flagging crosswalks with gravel joints, including hauling same.

(U) Laying flagging crosswalks with gravel joints, including hauling same, preparing site and concrete base.

## Paving with Asphalt.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1910.
* Parkman street, between North Russell and Blossom streets.	Warren Brothers Company...	Aug. 17, 1910.	Completed Sept. 17, 1910.	(A) 475 square yards @ \$2.62 (B) 10 square yards @ 0.30 (C) 410 linear feet @ 0.25 (D) 5 square yards @ 1.00 (E) 10 square yards @ 0.35 (F) 10 square yards @ 1.70 (G) 240 square yards @ 0.25	\$1,244.50 3.00 102.50 5.00 3.50 17.00 60.00
† 1 Kingston street, between Essex and Beach streets.	The Barber Asphalt Paving Company.	Sept. 27, 1910.	Completed Oct. 22, 1910.	(B) 1,855 square yards @ \$1.56 (C) 40 linear feet @ 0.20 (D) 10 square yards @ 0.85 (E) 10 square yards @ 0.35 (F) 20 square yards @ 0.85 (G) 16 square yards @ 0.95 (H) 5 square yards @ 0.85 (I) 16 square yards @ 0.95 (J) 15 cubic yards @ 9.94 (K) 5 cubic yards @ 7.40 (L) 30 square yards @ 0.30	\$2,862.60 8.00 8.50 3.50 17.00 15.20 4.25 15.20 149.10 37.00 9.00
† 2 Doane street, from Broad street, about 130 feet westerly.	The Barber Asphalt Paving Company.	Nov. 3, 1910.	Completed Nov. 21, 1910.	(B) 260 square yards @ \$1.49 (C) 50 square yards @ 1.25 (D) 10 square yards @ 1.25 (E) 5 cubic yards @ 8.00 (F) 10 cubic yards @ 6.00	\$3,496.20 62.50 12.50 40.00 60.00

<sup>1</sup> Advertised and awarded to lowest bidder.<sup>2</sup> Without competition.

\* Acme asphalt. † Trinidad asphalt.

## Paving with Asphalt.—Concluded.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1910.
* 1 Massachusetts avenue, southerly roadway between Columbus avenue and Washington street.	Warren Brothers Company . .	Nov. 7, 1910.	Completed Dec. 7, 1910.	(B) 5,500 square yards @ \$1.39 (C) 500 linear feet, @ 0.20 (D) 80 square yards @ 0.35 (E) 20 square yards @ 0.85 (F) 20 square yards @ 0.50 (G) 80 square yards @ 0.75 (H) 30 cubic yards @ 9.95 (I) 100 square yards @ 1.00 (J) 30 cubic yards @ 7.00 (K) 100 square yards @ 0.30 (L) 30 cubic yards @ 210.00 (M) 100 square yards @ 30.00	\$7,645.00 28.00 17.00 10.00 60.50 298.50 100.00 210.00 30.00

<sup>1</sup> Advertised and awarded to lowest bidder.

## EXPLANATION OF LETTERS.

- (A) Furnishing and laying a  $1\frac{1}{2}$ -inch wearing surface and a  $1\frac{1}{4}$ -inch binder and concrete base, including preparing site and guaranteeing same for a period of five (5) years after completion.
- (B) Furnishing and laying a  $1\frac{1}{2}$ -inch wearing surface and a  $1\frac{1}{4}$ -inch binder on existing concrete base, including preparing site and guaranteeing same for a period of five (5) years after completion.
- (C) Resetting edgestone.
- (D) Laying granite block paving with pitch joints and concrete base, including preparing site.
- (E) Relaying granite block paving with gravel joints, including preparing site.
- (F) Relaying granite block paving with pitch joints, including preparing site.
- (G) Laying flagging crosswalks with pitch joints and concrete base, including preparing site.
- (H) Relaying flagging crosswalks with gravel joints, including preparing site.
- (I) Relaying flagging with pitch joints, including preparing site.
- (J) Furnishing and laying extra bituminous binder.
- (K) Furnishing and laying concrete base, including preparing site.
- (L) Furnishing and laying extra concrete base.
- (M) Relying brick sidewalks.

## Repairing Asphalt Pavement.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1910.
* † Repairing asphalt pavements . . .	The Barber Asphalt Paving Company.	Feb. 4, 1910.	Completed Jan. 31, 1911.	\$15,000; wearing surface and bituminous binder, \$1.49 per square yard; extra bituminous binder, \$8 per cubic yard; concrete base, \$1 per square yard . . . . .	\$19,516.05

<sup>\*</sup> Advertised and awarded to lowest bidder.<sup>†</sup> These repairs are guaranteed for a period of (3) three years after completion.

## STREET DEPARTMENT — HIGHWAY DIVISION. 255

## Street Construction under Chapter 323 of Acts of 1891 or Special Acts or Amendments Thereto.

Contract.	Awarded to	Dated.	Progress of Work.	Estimated Cost as per Estimated Quantities, not Including Material Furnished by City.	Amount Expended in 1910.
<sup>1</sup> Sudan street, between Dorchester avenue and Sigamore street.	J. C. Coleman & Sons Co. . . . .	April 8, 1910.	Completed May 10, 1910. . . . .	\$2,732 85	\$2,779 75
<sup>1</sup> Farquhar street, between South and Selvyn streets.	Thomas F. Minton . . . . .	April 8, 1910.	Completed July 22, 1910. . . . .	2,758 45	3,029 31
<sup>1</sup> Kingsdale street, from Wales street about 250 feet easterly.	Joseph B. O'Rourke & Co. . . . .	April 8, 1910.	Completed July 11, 1910. . . . .	1,251 25	1,446 20
<sup>1</sup> Wentworth street, between Norfolk street and Dunbar avenue.	Joseph B. O'Rourke & Co. . . . .	April 15, 1910.	Completed July 30, 1910. . . . .	3,353 00	3,399 13
<sup>1</sup> Mora street, between Washington street and Milton avenue.	Joseph B. O'Rourke & Co. . . . .	April 15, 1910.	Completed Oct. 3, 1910. . . . .	4,912 26	5,379 00
<sup>1</sup> Whitman street, between Norfolk street and Dunbar avenue.	Joseph B. O'Rourke & Co. . . . .	April 15, 1910.	Completed Aug. 1, 1910. . . . .	3,114 31	3,276 67
<sup>1</sup> Mechanic street, between Ruggles and Edgar streets.	William J. Rafferty & Co. . . . .	April 15, 1910.	Completed Aug. 17, 1910. . . . .	412 40	433 09
<sup>1</sup> Edgar street, between Parker and Mechanic streets.	William J. Rafferty & Co. . . . .	April 15, 1910.	Completed Aug. 17, 1910. . . . .	650 15	653 99
<sup>1</sup> Howe street, from Hanock street about 657 feet southwesterly.	James Doherty. . . . .	April 26, 1910.	Completed June 23, 1910. . . . .	2,606 45	2,663 56
<sup>1</sup> Alther street, between Hampden and Read-ing streets.	James Doherty. . . . .	April 26, 1910.	Completed May 9, 1910. . . . .	539 99	531 33
<sup>1</sup> Aldrich street, between Belgrade avenue and Beech street.	West Roxbury Trap Rock Co.	April 30, 1910.	Completed Oct. 1, 1910. . . . .	7,119 50	7,244 76
<sup>1</sup> Colberg avenue, between Belgrade avenue and Beech street.	West Roxbury Trap Rock Co.	April 30, 1910.	Completed Nov. 1, 1910. . . . .	6,534 55	6,708 91

<sup>1</sup> Advertised and awarded to lowest bidder.

## Street Construction under Chapter 323 of Acts of 1891 or Special Acts or Amendments Thereto.—Concluded.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost as per Estimated Quantities, not Including Materials Furnished by City.	Amount Expended in 1910.
1 Meehan street, between Williams street and Rossone road.	James Doherty.....	May 6, 1910.	Completed July 13, 1910.....	\$1,243 15	\$1,373 42
1 Welles avenue, between Dorchester avenue and Argyle street.	William J. Rafferty & Co. ....	May 6, 1910.	Completed Aug. 31, 1910.....	4,563 80	4,940 85
1 Kempton street, between Huntington avenue and Fenwood road.	J. C. Coleman & Sons Co. ....	May 6, 1910.	Completed July 25, 1910.....	2,495 00	2,513 40
1 Alpha road, between Waldeck and Park sts. .	James Doherty.....	May 13, 1910.	Completed Aug. 15, 1910.....	5,310 17	5,608 63
1 Clarkwood street, between Blue Hill avenue and Norfolk street.	James H. McCarthy.....	May 13, 1910.	Unfinished.....	5,454 51	4,920 64
1 Balfour street, between Wayland and Dalkeith streets.	J. B. O'Rourke & Co. ....	May 13, 1910.	Completed Sept. 20, 1910.....	2,050 95	2,141 89
1 Deaconess road, between Brookline avenue and Bellevue street.	J. C. Coleman & Sons Co. ....	May 17, 1910.	Completed July 22, 1910.....	1,546 10	1,628 54
1 Plainfield street, between Rossmore road and Williams street.	Thomas F. Minton.....	May 20, 1910.	Completed Aug. 19, 1910.....	1,241 40	1,305 45
1 Rosemont street, between Gustine and Train streets.	William J. Rafferty & Co. ....	May 20, 1910.	Completed July 27, 1910.....	2,194 30	2,268 81
1 Antrim street, between Bennington and Ashley streets.	J. H. McCarthy.....	June 27, 1910.	Completed Nov. 1, 1910.....	2,555 00	2,742 34
1 Taft street, between Dorchester avenue and Pleasant street.	James Doherty.....	July 7, 1910.	Completed Aug. 9, 1910.....	2,089 40	2,245 76*
1 Buckingham street, between Lawn street and Fisher avenue.	J. C. Coleman & Sons Co. ....	Aug. 17, 1910.	Unfinished.....	2,914 50	722 47
*1 Damrell street, between Dorchester and Old Colony avenues.	Central Construction Co. ....	Aug. 19, 1910.	Completed Nov. 30, 1910.....	8,247 80	8,410 54

<sup>1</sup> Ralston street, between Dorchester avenue and Boston street.	James Doherty.....	Sept. 8, 1910.	Unfinished.....	2,606 96	1,524 75
<sup>1</sup> Leon street, between Ruggles and Greenleaf streets.	James Doherty.....	Sept. 8, 1910.	Unfinished.....	3,047 20	2,715 55
<sup>1</sup> West Park street, between Bernard street and the New England Railroad.	James Doherty.....	Oct. 3, 1910.	Not started.....	1,159 50	
<sup>1</sup> Westcott street, between West Park street and Talbot avenue.	James Doherty.....	Oct. 3, 1910.	Not started.....	2,151 65	
<sup>1</sup> Morton street, from Blue Hill avenue about 580 feet easterly.	James Doherty.....	Oct. 15, 1910.	Not started.....	4,294 60	
<sup>1</sup> Addison street, between Saratoga and Pope streets.	James Doherty.....	Nov. 26, 1910.	Unfinished.....	14,049 50	2,565 00

<sup>1</sup> Advertised and awarded to lowest bidder.

\* See paving with brick blocks.

#### \* Artificial Stone Sidewalks.

CONTRACTOR	DATED.	PROGRESS OF WORK.	PRICE PER SQUARE FOOT.	AMOUNT EXPENDED IN 1910.
W. A. Murtfeldt Company.....	March 31, 1910.....	Completed Jan. 31, 1911.....	\$0 06	\$1,317 78
Adams Pond Company.....	March 31, 1910.....	Completed Jan. 31, 1911.....	06	4,043 38
David W. Biggs & Co.....	March 31, 1910.....	Completed Jan. 31, 1911.....	06	1,139 16
Jeremiah J. Sullivan.....	March 31, 1910.....	Completed Jan. 31, 1911.....	06	349 04
James Doherty.....	March 31, 1910.....	Completed Jan. 31, 1911.....	06	15 72
Robert Eager, Jr.....	April 6, 1910.....	Completed Jan. 31, 1911.....	06	977 30
Warren Brothers Company.....	April 8, 1910.....	Completed Jan. 31, 1911.....	06	1,370 76
John Vernerin & Sons.....	April 11, 1910.....	Completed Jan. 31, 1911.....	06	328 68

\* These walks are guaranteed by a surety company bond for five (5) years from date of completion, and were laid on various public streets where the contractor had agreements with the abutters. The price, 6 cents per square foot, is equivalent to the expense to the city for one-half the cost of a brick sidewalk.

\* Artificial Stone Sidewalks.—*Concluded.*

CONTRACTOR.	Dated.	Progress of Work.	Price per Square Foot.	Amount Expended in 1910.
Simpson Brothers Corporation.....	April 12, 1910.....	Completed Jan. 31, 1911.....	\$0 06	\$1,266 18
Thomas J. Hind Company.....	April 21, 1910.....	Completed Jan. 31, 1911.....	06	2,170 98
Michael D. Russo.....	May 20, 1910.....	Completed Jan. 31, 1911.....	06	219 90
John Landis.....	July 16, 1910.....	Completed Jan. 31, 1911.....	06	283 38
C. W. Dolloff & Co.....	July 16, 1910.....	Completed Jan. 31, 1911.....	06	39 06
John Mahan.....	July 28, 1910.....	Completed Jan. 31, 1911.....	06	112 44
Thompson Starrett Company.....	Nov. 14, 1910.....	Completed Jan. 31, 1911.....	06	

\* These walks are guaranteed by a surety company bond for (5) years from date of completion, and were laid on various public streets where the contractor had agreements with the abutters. The price, 6 cents per square foot, is equivalent to the expense to the city for one-half the cost of a brick sidewalk.

Repairing Artificial Stone Sidewalks.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1910.
<sup>1</sup> Repairing artificial stone sidewalks..	Robert Eagar, Jr. ....	May 6, 1910.	.....	Less than 20 square feet, \$5 lump sum; 20 to 100 square feet, 20c. per square foot; 100 to 300 square feet, 18c. per square foot; 300 to 500 square feet, 17c. per square foot; 500 to 700 square feet, 16½c. per square foot; 700 to 900 square feet, 16½c. per square foot; 900 square feet and over, 16c. per square foot.	\$2,174 80

<sup>1</sup> Advertised and awarded to lowest bidder.

## † Furnishing and Laying Artificial Stone Sidewalks.

Contract.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1910.
*1,2 Sudan street, between Dorchester avenue and Sagamore street.	J. C. Coleman & Sons Co.,.....	April 8, 1910.	Completed May 10, 1910.	8,900 square feet @ \$0.145.....	\$1,247 00
*1,2 Farquhar street, between South and Selwyn sts.	Thomas F. Minton,.....	April 8, 1910.	Completed July 22, 1910.	9,400 square feet @ 0.1375.....	1,292 50
*1,2 Kingsdale street, from Wales street, about 250 feet easterly.	Joseph B. O'Rourke & Co.,.....	April 8, 1910.	Completed July 11, 1910.	2,970 square feet @ 0.145.....	430 65
*1,2 Wentworth street, between Norfolk street and Dunbar avenue.	Joseph B. O'Rourke & Co.,.....	April 15, 1910	Completed July 30, 1910.	7,360 square feet @ 0.145.....	1,096 20
*1,2 Mora street, between Washington street and Milton avenue.	Joseph B. O'Rourke & Co.,.....	April 15, 1910.	Completed Oct. 3, 1910.	10,370 square feet @ 0.145.....	1,503 65
*1,2 Whitman street, between Norfolk street and Dunbar avenue.	Joseph B. O'Rourke & Co.,.....	April 15, 1910.	Completed Aug. 1, 1910.	7,470 square feet @ 0.145.....	1,083 15
*1,2 Mechanic street, between Ruggles and Edgar sts.	William J. Rafferty & Co.,.....	April 15, 1910.	Completed Aug. 17, 1910.	1,340 square feet @ 0.15 $\frac{1}{8}$ .....	206 03
*1,2 Edgar street, between Parker and Mechanic sts.	William J. Rafferty & Co.,.....	April 15, 1910.	Completed Aug. 17, 1910.	1,540 square feet @ 0.15 $\frac{1}{8}$ .....	236 78
*1,2 Howe street, from Hancock street, about 657 feet southwesterly.	James Doherty.....	April 26, 1910.	Completed June 15, 1910.	5,940 square feet @ 0.144.....	855 36

\* Laid in connection with the construction of the street, under chapter 323 of the Acts of 1891 and amendments.

† Those walks are guaranteed by a surety company bond for five (5) years from date of completion.

<sup>1</sup> Advertised and awarded to lowest bidder.

<sup>2</sup> For additional items in this contract see Street Construction, under chapter 323, Acts of 1891, or special acts or amendments thereto.

*<sup>†</sup> Furnishing and Laying Artificial Stone Sidewalks.—Continued.*

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1910.
* <sup>1,2</sup> Aldrich street, between Belgrade avenue and Beech street.	West Roxbury Trap Rock Company.	April 30, 1910.	Completed Oct. 1, 1910.	15,250 square feet @ \$0.14..... 120 linear ft. curb @ 0.85.....	\$2,135 00 102 00
* <sup>1,2</sup> Colberg avenue, between Belgrade avenue and Beech street.	West Roxbury Trap Rock Company.	April 30, 1910.	Completed Nov. 1, 1910.	12,750 square feet @ 0.14..... 124 linear ft. curb @ 0.85.....	1,785 00 105 40
* <sup>1,2</sup> Welles avenue, between Dorchester Avenue and Argyle street.	William J. Rafferty & Co. ....	May 6, 1910.	Completed Aug. 31, 1910.	7,800 square feet @ 0.15.....	1,170 00
*	Kempton street, between Huntington avenue and Fenwood road.	J. C. Coleman & Sons Co. ....	May 6, 1910.	Completed July 25, 1910.	4,060 square feet @ 0.15..... 40 linear ft. curb @ 0.90.....
* <sup>1,2</sup> Alpha road, between Wal-deck and Park streets.	James Doherty.....	May 13, 1910.	Completed Aug. 15, 1910.	6,500 square feet @ 0.144.....	979 20
* <sup>1,2</sup> Clarkwood street, between Blue Hill avenue and Norfolk street.	James H. McCarthy.....	May 13, 1910.	Unfinished.	3,600 square feet @ 0.15.....	540 00
* <sup>1,2</sup> Balfour street, between Wayland and Dalkeith streets.	J. B. O'Rourke & Co. ....	May 13, 1910.	Completed Sept. 20, 1910.	4,440 square feet @ 0.15.....	666 00
* <sup>2</sup> Deaconess road, between Brookline avenue and Bellevue street.	J. C. Coleman & Sons Co. ....	May 17, 1910.	Completed July 22, 1910.	3,780 square feet @ 0.16.....	604 80
* <sup>1,2</sup> Plainfield street, between Rossmore road and Williams street.	Thomas F. Minton.....	May 20, 1910.	Completed Aug. 19, 1910.	2,160 square feet @ 0.15.....	324 00
* <sup>1,2</sup> Rosenmont street, between Gustine and Train sts.	William J. Rafferty & Co. ....	May 20, 1910.	Completed July 27, 1910.	4,550 square feet @ 0.154.....	698 45
					691 89

* <sup>1,2</sup> Tuft street, between Dorchester avenue and Peasant street.	James Doherty.....	July 7, 1910.	Completed Aug. 9, 1910.	1,390 square feet @ 0.14 <sup>3</sup> ,....	205 03	208 27
1 Bowdoin avenue, between Nos. 61 and 73.	W. A. Murtfeldt Company.....	July 13, 1910.	Completed Aug. 17, 1910.	710 square feet @ 0.149,....	105 79	106 54
1 School street, southerly side from Washington to Athelwold streets.	W. A. Murtfeldt Company.....	July 13, 1910.	Completed Aug. 24, 1910.	3,200 square feet @ 0.149,....	476 80	612 49
† Wellis avenue, between Argyle street and Talbot avenue.	William J. Rafferty & Co.....	July 16, 1910.	Completed Sept. 8, 1910.	3,500 square feet @ 0.15,....	525 00	521 70
* <sup>1</sup> Harvard street, between Washington street and Blue Hill avenue.	W. A. Murtfeldt Company.....	July 21, 1910.	Completed Nov. 1, 1910.	29,000 square feet @ 0.149,....	4,321 00	3,692 82
† <sup>1</sup> Washington street, westerly side, between Williams and Marvin streets.	Jeremiah J. Sullivan.....	Sept. 2, 1910.	Completed Oct. 11, 1910.	7,880 square feet @ \$0.17,....	1,339 60	1,369 01
* Beaumont street, between Carruth and Adams sts.	Adams Pond Company.....	Sept. 8, 1910.	Completed Sept. 26, 1910. Unfinished.	16,000 square feet @ 0.15,....	2,400 00	1,707 80
* <sup>1,2</sup> Leon street, between Ruggles and Greenleaf sts.	James Doherty.....	Sept. 8, 1910.		7,490 square feet @ 0.135,....	1,011 15	222 00
Rowena street, between Carruth and Bushnell sts.	Adams Pond Company .....	Sept. 19, 1910.	Completed Sept. 30, 1910.	5,250 square feet @ 0.16,....	840 00	845 76
* <sup>1,2</sup> West Park street, between Bernard street and the New England Railroad.	James Doherty.....	Oct. 3, 1910.	Not started.	4,150 square feet @ 0.129,....	535 35	
* <sup>1,2</sup> Westcott street, between West Park street and Talbot avenue.	James Doherty.....	Oct. 3, 1910.	Not started.	8,400 square feet @ 0.13,....	1,092 00	

\* Laid in connection with the construction of the street, under chapter 323 of the Acts of 1891 and amendments.

† For additional items in this contract see Paving and Regulating.

‡ These walks are guaranteed by a surety company bond for five (5) years from date of completion.

<sup>1</sup> Advertised and awarded to lowest bidder.

<sup>2</sup> For additional items in this contract see Street Construction, under chapter 323, Acts of 1891, or special acts or amendments thereto.

‡ Furnishing and Laying Artificial Stone Sidewalks.—Concluded.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1910.
* <sup>1,2</sup> Morton street, from Blue Hill avenue, about 580 feet easterly.	James Doherty.....	Oct. 15, 1910.	Not started.	8,570 square feet @ .80. <sup>14</sup> .....	\$1,199 80
† Glenway street, westerly side, near Harvard street.	Jeremiah J. Sullivan.....	Oct. 22, 1910.	Completed Nov. 15, 1910.	1,400 square feet @ .0.18. ....	252 00
<sup>1</sup> Ruthven street and Elm Hill avenue, at Mount Pleasant Home.	Jeremiah J. Sullivan.....	Oct. 22, 1910.	Completed Nov. 7, 1910.	4,500 square feet @ .0.179. ....	805 50
<sup>1</sup> Harrison avenue, Waltham and Union Park streets, around triangular planting space.	Jeremiah J. Sullivan.....	Oct. 22, 1910.	Completed Nov. 11, 1910.	2,400 square feet @ .0.18. ....	432 00
* <sup>1</sup> Roehdale street, between Cobden and Fenner sts.	Jeremiah J. Sullivan.....	Nov. 14, 1910.	Completed Nov. 21, 1910.	2,550 square feet @ .0.18. ....	459 00
<sup>1</sup> Saratoga, Moote and Bennington streets, East Boston.	David M. Biggs & Co.....	Nov. 17 1910.	Completed Nov. 30, 1910.	4,000 square feet @ .0.18. ....	828 00
					781 74.

\* Laid in connection with the construction of the street, under chapter 323 of the Acts of 1891 and amendments.

† For additional items in this contract see Paving and Regulating.

‡ These walks are guaranteed by a surety company bond for five (5) years from date of completion.

1 Advertised and awarded to lowest bidder.

2 For additional items in this contract see Street Construction, under chapter 323, Acts of 1891, or special acts or amendment thereto.

## Paving and Regulating.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost as per Estimated Quantities, not Including Material Furnished by City.	Amount Expended in 1910.
1 Round Hill street, between Walden and Gay Head streets.	Commonwealth Company.	April 22, 1910.	Completed July 16, 1910. ....	\$678 75	\$589 60
1 North Market street, between Merchants row and Commerce street.	C. W. Dolloff & Co. ....	May 10, 1910.	Completed June 25, 1910. ....	10,466 25	11,026 75
1 Dorchester avenue, between Mt. Washington avenue and Dorchester Avenue Bridge.	Thomas Kiernan. ....	May 20, 1910.	Completed July 20, 1910. ....	1,383 70	1,516 47
1 Charles street, from Boylston street across Beacon street.	Coleman Brothers. ....	May 28, 1910.	Completed Oct. 17, 1910. ....	25,392 50	26,082 07
1 Forbes street, between Centre street and Chestnut avenue.	Anthony Dimond. ....	May 28, 1910.	Completed July 26, 1910. ....	625 70	752 31
* 2 Welles avenue, between Argyle street and Talbot avenue.	William J. Rafferty & Co. ....	July 16, 1910.	Completed Sept. 8, 1910. ....	1,797 92	1,986 95
* 1 Harvard street, between Washington street and Blue Hill avenue.	W. A. Murfield Company. ....	July 21, 1910.	Completed Nov. 1, 1910. ....	630 00	704 95
* 1 Washington street, westerly side, between Williams and Marvin streets.	Jeremiah J. Sullivan. ....	Sept. 2, 1910.	Completed Oct. 11, 1910. ....	70 00	38 38
1 Brent street, between Washington street and Talbot avenue.	C. W. Dolloff & Co. ....	Oct. 1, 1910.	Completed Nov. 17, 1910. ....	524 00	551 36
1 Old Colony avenue, between Dorchester and Hyde streets.	James Doherty. ....	Oct. 15, 1910.	Unfinished. ....	11,657 80	Nothing.
* 1 Glenway street, westerly side, near Harvard street.	Jeremiah J. Sullivan. ....	Oct. 22, 1910.	Completed Nov. 15, 1910. ....	48 00	46 40

<sup>1</sup> Advertised and awarded to lowest bidder. <sup>2</sup> Without competition.  
\* For additional items in this contract see Furnishing and Laying Artificial Stone Sidewalks.

## Miscellaneous Agreements.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1910.
Furnishing single and double teams and extra men in Paving, Sanitary, Sewer and Street Cleaning Divisions in District No. 4, Brighton.	Joseph McGreevey . . . . .	Feb. 4, 1910.	Completed Jan. 31, 1911.	Single team, \$3; double team, \$5; extra men, \$2.	\$192 50
Furnishing single and double teams and extra men in Paving, Sanitary, Sewer and Street Cleaning Divisions in Districts No. 6 and 9, Dorchester and Ashmont.	John H. Winsloe . . . . .	Feb. 4, 1910.	Completed Jan. 31, 1911.	Single team, \$2.98; double team, \$4.42; extra men, \$2.	*9,582 53 †9,733 51
Furnishing single and double teams and extra men in Paving, Sanitary, Sewer and Street Cleaning Divisions in Districts No. 2 and 3, single team, \$3.05; double team, \$4.75; extra men, \$1.80.	Bernard E. Grant . . . . .	Feb. 4, 1910.	Completed Jan. 31, 1911.	For Districts No. 2 and 3, single team, \$3.05; double team, \$4.75; extra men, \$1.80. For District No. 10, single team, \$3; double team, \$4.50; extra men, \$1.80.	*4,667 89 †5,171 35
Furnishing single and double teams and extra men in Paving, Sanitary, Sewer and Street Cleaning Divisions in Districts No. 2 and 3, East Boston and Charlestown; and District No. 10, North and West Ends and Back Bay.	George H. Noone . . . . .	Feb. 4, 1910.	Completed Jan. 31, 1911.	Single team, \$3; double team, \$4.90; extra men, \$2.	*9,568 00 †10,362 45
Furnishing single and double teams and extra men in Paving, Sanitary, Sewer and Street Cleaning Divisions in District No. 5, West Roxbury, and District No. 7, Roxbury, south, and Jamaica Plain.	Joseph Sprissler . . . . .	Feb. 4, 1910.	Completed Jan. 31, 1911.	Single team, \$3.25; double team, \$4.85; extra men, \$2.	*6,686 67 †7,723 80
Furnishing single and double teams and extra men in Paving, Sanitary, Sewer and Street Cleaning Divisions in District No. 8, South End and Roxbury, north.	John J. Loonie . . . . .	Feb. 4, 1910.	Completed Jan. 31, 1911.	Single team, \$3; double team, \$5; extra men, \$2.	*2,674 25 †2,966 75
Teaming edgestone and flagging from the South End Paving Yard.	S. & R. J. Lombard . . . . .	Feb. 4, 1910.	Completed Jan. 31, 1911.	\$0.07 per linear foot. . . . .	1,097 89

\*Teaming edgestone and flagging from the South End Paving Yard.

## STREET DEPARTMENT — HIGHWAY DIVISION. 265

Furnishing four-gear easings for Neponset Bridge.	Porter Whidden Company..	March 12, 1910.	Completed March 29, 1910.	\$25 per day for each watering cart.	100 00
Furnishing and erecting sidewalk beams for Berkley Street Bridge.	The Boston Bridge Works, Inc.	March 12, 1910.	Completed April 9, 1910.	\$211 per day for each watering cart.	211 00
" Laying concrete foundation and walks for Toll Gate Way footbridge.	The Boston Bridge Works, Inc.	March 12, 1910.	Completed June 10, 1910.	\$700 per day for each watering cart.	700 00
Insuring Stevens-Duryea automobile against fire and damage.	Federal Insurance Company,	March 21, 1910.	Expires March 21, 1911.	\$24 per year for each watering cart.	24 00
Insuring Stevens-Duryea automobile against liability for personal injury.	General Accident, Fire and Life Assurance Corporation, Ltd.	March 21, 1910.	Expires March 21, 1911.	\$38 per year for each watering cart.	38 00
Watering and oiling streets in Brighton, Mass.	J. H. McCarthy.....	March 26, 1910.	Completed Dec. 1, 1910.	\$5.25 per day for each watering cart.	3,766 39
Watering and oiling streets in East Boston and Charlestown.	J. P. O'Riorden.....	March 26, 1910.	Completed Dec. 1, 1910.	\$5.40 per day for each watering cart; \$7.10 per day for each watering cart with three-horse hitch.	6,480 00
Watering and oiling streets in South End and Roxbury, north.	Joseph McGreevey .....	March 26, 1910.	Completed Dec. 1, 1910.	\$5 per day for each watering cart; \$6.50 per day for each watering cart with three-horse hitch.	8,540 00
Watering and oiling streets in West Roxbury.	W. McGinniss & Co. ....	March 26, 1910.	Completed Dec. 1, 1910.	\$5 per day for each watering cart.	4,471 00
Watering and oiling streets in North south, and Jamaica Plain.	James E. Noble .....	March 26, 1910.	Completed Dec. 1, 1910.	\$5.15 per day for each watering cart; \$7 per day for each watering cart with three-horse hitch.	8,445 99
Watering and oiling streets in Dorchester and Ashmont.	John H. Winsloe .....	March 26, 1910.	Completed Dec. 1, 1910.	\$4.94 per day for each watering cart.	7,988 90
" Watering and oiling streets in North and West Ends and Back Bay.	William Gilligan Company..	March 26, 1910.	Completed Dec. 1, 1910.	\$5.25 per day for each watering cart; \$7.50 per day for each watering cart with three-horse hitch.	11,442 70
Watering and oiling streets in South Boston and Dorchester, north.	Thomas F. Lynch .....	March 26, 1910.	Completed Dec. 1, 1910.	\$5.18 per day for each watering cart; \$7.18 per day for each watering cart with three-horse hitch.	8,108 00
Cleaning streets and sidewalks in Brighton.	Francis B. McKenney.....	April 1, 1910.	Completed Dec. 1, 1910.	\$5,990 per day for each watering cart.	5,788 61

<sup>1</sup> Advertised and awarded to lowest bidder.

\* Amount paid during 1910.

† Amount earned during 1910.

## Miscellaneous Agreements.—Continued.

CONTRACT.	AWARDED TO	DATED.	PROGRESS OF WORK.	ESTIMATED COST.	AMOUNT EXPENDED IN 1910.
1 Cleaning streets and sidewalks in West Roxbury.	Joseph McGreevey.....	April 1, 1910.	Completed Dec. 1, 1910.	\$8,490.....	\$8,443 50
1 Cleaning streets and sidewalks in Dorchester and Ashmont.	John H. Winsloe.....	April 1, 1910.	Completed Dec. 1, 1910.	\$10,979.....	13,922 50
Woodwork and painting in housing operating machinery for Nipponset Bridge.	H. P. Oakman's Sons.....	April 11, 1910.	Completed May, 1910.	\$95.....	Nothing.
1 Excavating and grading Morton street, between Harvard street and Blue Hill avenue.	Commonwealth Construction Company.	April 21, 1910.	Completed May 16, 1910.	800 cubic yards at \$0.80 per cubic yard.....	1,008 70
Relay tar concrete sidewalks on Centre street, Jamaica Plain.	Simpson Brothers Corporation.	April 28, 1910.	Completed June 9, 1910.	\$169.....	169 00
Lease of Glendon Wharf.....	Renton Whidden.....	April 29, 1910.	Expires Jan. 31, 1911.	\$3,000 per year and taxes.....	2,000 00
Furnishing heavy brass tubing for Charlestown Bridge.	The Lumsden and Van Stone Company.	May 7, 1910.	Completed June 21, 1910.	\$720.....	720 00
Repairing Charlestown Bridge, damaged by fire.	Boston Bridge Works, Inc..	May 20, 1910.	Completed Dec., 1910.	.....	7,768 17
Repairing electric equipment at the Charlestown Bridge, damaged by fire.	General Electric Company..	May 20, 1910.	Completed Oct. 13, 1910.	\$5,000.....	3,979 63
1 Repairing the face of the draw landing of the L Street Bridge.	George T. Rendle.....	June 10, 1910.	Completed July 11, 1910.	\$647 16.....	647 16
Repairing the operating machinery of the Charlestown Bridge.	H. J. Shaw.....	June 10, 1910.	Completed Dec. 16, 1910.	\$1,700.....	†1,476 37
Power room repairs, Charlestown Bridge,	Boston Furnace Company..	July 20, 1910.	Completed Sept. 30, 1910.	\$500.....	226 75
Furnishing and erecting beams and bracings at the Columbus Avenue Bridge, over Boston & Albany Railroad.	Boston Bridge Works, Inc..	Aug. 2, 1910.	Completed Aug. 13, 1910.	\$571.....	571 00

## STREET DEPARTMENT — HIGHWAY DIVISION. 267

Repairing steel superstructure of Dover Street Bridge.	New England Company.	Aug. 11, 1910.	Completed Aug. 27, 1910.	695 70
Installing two water-closets at Street Department yard, Highland street.	James J. McCarty.....	Aug. 16, 1910.	Completed.	125 00
Repairing the faces of draw piers at Warren Bridge.	W. S. Rendle.....	Aug. 17, 1910.	Completed March 4, 1910.	3,146 96
Furnish and erect beams and angles, under westerly sidewalk, Columbus Avenue Bridge, over Boston & Albany Railroad tracks.	Boston Bridge Works, Inc..	Aug. 24, 1910.	Completed Sept. 2, 1910.	500 00
1 Reconstruction of Albany Street Bridge, over Boston & Albany freight tracks.	New England Company.	Sept. 8, 1910.	Completed Jan. 16, 1911.	\$8,067 78
1 Repairing Broadway Bridge, over Boston & Albany Railroad.	George T. Rendle.....	Sept. 8, 1910.	Completed Jan. 10, 1911.	11,060 68
Relay asphalt sidewalks on Dover Street Bridge.	Simpson Brothers Corporation.	Sept. 19, 1910.	Completed Oct. 1, 1910.	636 07
2 Removing manure from the various yards and stables of the Street Department, Complete wire fence at Toll Gate Way, footbridge.	Joseph A. Kelley.....	Sept. 22, 1910.	Expires Jan. 31, 1912.	138 99
1 Repairing draw span of Dover Street Bridge, over Fort Point Channel.	W. H. Ellis .....	Oct. 3, 1910.	Completed Oct. 10, 1910.	175 00
1 Painting the draw span of Charlestown Bridge.	Boston Bridge Works, Inc..	Oct. 15, 1910.	Not completed.	\$3,257 50.....
1 Furnishing in place hard pine timbers under decking of Broadway Bridge.	George T. Rendle.....	Oct. 17, 1910.	Not completed.	\$3,850.....
1 Building concrete wall at Blackwood street.	Commonwealth Construction Company.	Oct. 19, 1910.	Completed Dec. 23, 1910.	435 20
1 Painting the fixed spans of Dover Street Bridge, over Fort Point Channel.	B. R. Coullahan.....	Oct. 27, 1910.	Completed Dec. 21, 1910.	1,200 00
Repairing end lifts of Dover Street Draw,	H. J. Shaw.....	Oct. 31, 1910.	Not completed.	\$565.....
				Nothing.

<sup>1</sup> Advertised and awarded to lowest bidder. <sup>2</sup> Advertised and awarded to only bidder.

<sup>†</sup> Not final.

## Miscellaneous Agreements.—Concluded.

CONTRACT.	AWARDED TO	DATED.	PROGRESS OF WORK.	ESTIMATED COST.	AMOUNT EXPENDED IN 1910.
1 Replanking floor of draw pit of Summer Street Bridge.	George T. Rendle.....	Nov. 2, 1910.	Completed Dec. 1, 1910.	\$1,822 50.....	\$1,811 16
1 Filling, slope paving and fence, Freeport street, westerly side, at Commercial Point Bridge.	James Doherty.....	Nov. 8, 1910.	Completed Dec. 14, 1910.	\$1,431 74.....	1,500 57
Guarantee bond artificial stone sidewalks at 915 to 921 Boylston street.	American Bonding Company of Baltimore.	Nov. 8, 1910.	.....	Nothing.....	2 43 00
1 Removing snow and ice in Snow District No. 5.	A. De Stefano.....	Nov. 14, 1910.	May 1, 1911.	.....	110 52
1 Removing snow and ice in Snow District No. 2.	Joseph McGreevey.....	Nov. 17, 1910.	May 1, 1911.	.....	79 86
1 Removing snow and ice in Snow District No. 4.	Charles J. Jacobs Company,	Nov. 17, 1910.	May 1, 1911.	Nothing,.....	Nothing.
1 Removing snow and ice in Snow District Nos. 1 and 6.	J. C. Coleman and Sons Company.	Nov. 17, 1910.	May 1, 1911.	.....	572 67
Permission to dump snow and ice into tide waters.	Commonwealth of Massachusetts.	Nov. 21, 1910.	March 30, 1911.	\$1,000 .....	Nothing.
1 Removing snow and ice in Snow District No. 3.	Mark H. Lynch.....	Nov. 28, 1910.	May 1, 1911.	.....	52 80
1 Repairing Neponset Bridges over Neponset River.	Lawler Brothers.....	Dec. 16, 1910.	Completed Jan. 24, 1911.	\$1,523.....	Nothing.

<sup>1</sup> Advertised and awarded to lowest bidder.<sup>2</sup> Rebate paid Benjamin Fox.

## Boston and Cambridge Bridges.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1910.
Repairing Cambridge River Street Bridge.	Albert A. Hersey.....	June 29, 1910.	Completed Sept. 24, 1910.	\$3,567 50 .....	\$3,047 34

<sup>1</sup> Advertised and awarded to lowest bidder.

CONTRACTS IN FORCE MADE IN PREVIOUS YEARS.  
Paving with Brick Block.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1910.
Seneca street, between Harrison avenue and Albany street.	John E. Burns & Co.....	Oct. 28, 1909.	Cancelled April 8, 1910.	(A) 840 square yards @ \$2.75 (B) 5 square yards @ 1.55 (C) 10 square yards @ 0.40 (D) 1,000 linear feet @ 0.10 (E) 450 square yards @ 0.25	\$2,310 00 7 75 4 00 100 00 112 50  \$2,534 25

<sup>1</sup> Advertised and awarded to lowest bidder.

## EXPLANATION OF LETTERS.

- (A) Furnishing and laying brick block paving, including preparing site, concrete base and guaranteeing same for a period of five (5) years after completion.
- (B) Laying granite block paving with grout joints.
- (C) Relaying granite block paving with gravel joints.
- (D) Excavating and setting edgestones.
- (E) Relaying brick sidewalks.

## Street Construction Under Chapter 323 of Acts of 1891 or Special Acts or Amendments Thereto.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1910.
1 Carmen street, between Shafer and Kilton streets.	John McCourt & Co. ....	May 20, 1909.	Completed Dec. 3, 1909.....	\$3,201 60	\$500 00
1 Radcliffe street, between Harvard and Faxon streets.	Thomas Croke & Co. ....	May 26, 1909.	Completed Nov. 27, 1909.....	4,664 20	612 84
Covington street, between East Eighth street and Columbia road.	J. B. O'Rourke & Co. ....	June 5, 1909.	Completed May 2, 1910.....	1,662 71	100 73
1 Rexford street, between Blue Hill avenue and Oakland street.	James H. Ferguson....	June 5, 1909.	Completed June 14, 1910.....	6,584 00	1,225 23
1 Penhalow street, between Melville avenue and Mather street.	Frank H. Cowin Company... ....	July 15, 1909.	Completed May 10, 1910.....	1,038 66	175 64
1 Melbourne street, between Centre and Brent streets.	Thomas Croke & Co. ....	July 23, 1909.	Completed Nov. 17, 1909.....	1,751 18	234 01
1 Hyde Park avenue, from 300 feet north of Ashland street to Hyde Park line.	West Roxbury Trap Rock Company.	Sept. 14, 1909.	Completed Nov. 16, 1910.....	19,916 00	19,526 14
1 Evergreen street, from South Huntington avenue about 443 feet easterly.	J. H. McCarthy. ....	Sept. 29, 1909.	Completed Dec. 13, 1909.....	2,006 90	418 78
1 Marbury terrace, between Amory street and N. Y., N. H. & H. R. R.	James Doherty. ....	Oct. 18, 1909.	Completed April 13, 1910.....	1,479 95	1,274 27
1 Avenue Louis Pasteur, between Longwood avenue and the Fenway.	James Doherty. ....	Oct. 20, 1909.	Completed July 8, 1910.....	22,634 60	18,126 71
1 Prescott street, from Frankfort street to B. R. B. & L. R. R.	James Doherty. ....	Nov. 3, 1909.	Completed May 16, 1910.....	12,252 50	11,144 28

<sup>1</sup> Advertised and awarded to lowest bidder.<sup>†</sup> For additional items in this contract see furnishing and laying artificial stone sidewalks.

## †Furnishing and Laying Artificial Stone Sidewalks.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1910.
* 1 Rexford street, between Blue Hill avenue and Oakland street.	Warren Brothers Company...	June 9, 1909.	Completed April 20, 1910.	9,000 square feet @ \$0.1325, . . . \$1,192 50	\$1,192 77
* 1 Penhalow street, between Melville avenue and Mather street.	James Doherty . . . . .	July 15, 1909.	Completed April 23, 1910.	1,300 square feet @ 0.155, . . . . .	201 50
* 1, 2 Marbury terrace, between Amory street and N. Y., N. H. & H. R. R.	James Doherty . . . . .	Oct. 18, 1909.	Completed April 13, 1910.	4,360 square feet @ 0.135, . . . . .	588 60

\* Laid in connection with the construction of the street, under chapter 323 of the Acts of 1891 and amendments.

† These walks are guaranteed by a surety company bond for five (5) years from date of completion.

<sup>1</sup> Advertised and awarded to lowest bidder.

<sup>2</sup> For additional items in this contract see Street Construction, under chapter 323, Acts of 1891, or special acts or amendments thereto.

## Paving and Regulating.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost as per Estimated Quantities, not Including Materials Furnished by City.	Amount Expended in 1910.
1 Old Colony avenue and part of D and West Ninth streets, between Dorchester avenue and Dorchester street.	F. S. & A. D. Gore Corporation,	Oct. 1, 1908.	Completed Dec. 28, 1909. . . .	\$21,109 20	\$6,621 49
1 Washington street, between Green street and the Arborway.	John F. O'Connell. . . . .	June 19, 1909.	Completed Dec. 13, 1910. . . .	21,391 60	16,314 02
1 Albany street, between Broadway and Dover street.	F. S. & A. D. Gore Corporation,	July 6, 1909.	Completed Dec. 16, 1909. . . .	19,326 80	3,276 39
1 South Market street, between Commercial street and Atlantic avenue.	J. B. O'Reourke & Co. . . . .	Oct. 26, 1909.	Completed Dec. 3, 1909. . . .	12,352 55	660 65
1 Corbet street, between Norfolk and Selden streets.	James H. McCarthy. . . . .	Oct. 26, 1909.	Completed Jan. 20, 1910. . . .	5,423 50	6,028 58
1 Walden, Centre and Bickford streets, at the Thomas G. Plant Shoe Factory.	John McCourt & Co. . . . .	Nov. 1, 1909.	Completed Nov. 30, 1909. . . .	895 60	132 36
1 Washington street, from northerly side of Arborway to beyond N. Y., N. H. & H. R. R.	James Doherty. . . . .	Nov. 9, 1909.	Completed June 20, 1910. . . .	34,322 80	30,160 76

<sup>1</sup> Advertised and awarded to lowest bidder.

## Miscellaneous Agreements.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1910.
1 Teaming, edgestone and flagging from the South End Yard.	S. & R. J. Lombard.....	Feb. 19, 1909.	Completed Jan. 31, 1910.	\$0.07 per linear foot.....	\$38 86
1 Furnishing single and double teams and extra men in Paving, Sanitary, Sewer and Street Cleaning Divisions, in District No. 4, Brighton.	Clark & Shea.....	Feb. 19, 1909.	Completed Jan. 31, 1910.	Single team, \$2.75; double team, \$4.45; extra men, \$2.	40 62
1 Furnishing single and double teams and extra men in Paving, Sanitary, Sewer and Street Cleaning Divisions in Districts Nos. 2 and 3, East Boston and Charlestown.	Bernard E. Grant .....	Feb. 19, 1909.	Completed Jan. 31, 1910.	Single team, \$3; double team, \$4.85; extra men, \$2.	148 23
1 Furnishing single and double teams and extra men in Paving, Sanitary, Sewer and Street Cleaning Divisions in District No. 10, North and West Ends.	Bernard E. Grant .....	Feb. 19, 1909.	Completed Jan. 31, 1910.	Single team, \$3.05; double team, \$4.50; extra men, \$1.85.	768 25
1 Furnishing single and double teams and extra men in Paving, Sanitary, Sewer and Street Cleaning Divisions, in District No. 1, South Boston and Dorchester, north.	Thomas F. Lynch.....	Feb. 19, 1909.	Completed Jan. 31, 1910.	Single team, \$2.80; double team, \$5; extra men, \$2.	1,098 75
1 Furnishing single and double teams and extra men in Paving, Sanitary, Sewer and Street Cleaning Divisions, in District No. 1, South Boston and Dorchester, north.	James E. Noble .....	Feb. 27, 1909.	Completed Jan. 31, 1910.	Single team, \$3; double team, \$4.70; extra men, \$2.	1,139 50
1 Furnishing single and double teams and extra men in Paving, Sanitary, Sewer and Street Cleaning Divisions, in District No. 5, West Roxbury.	Wm. T. McNally Company ..	Feb. 27, 1909.	Completed Jan. 31, 1910.	Single team, \$3.15; double team, \$4.50; extra men, \$2.	304 65
1 Furnishing single and double teams and extra men in Paving, Sanitary, Sewer and Street Cleaning Divisions in District No. 8, South End and Roxbury, north.					

Advertised and awarded to lowest bidder.

## Miscellaneous Agreements.—Concluded.

Contract.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1910.
1 Furnishing single and double teams and extra men in Paving, Sanitary, Sewer and Street Cleaning Diversions, in District No. 7, Roxbury, south, and Jamaica Plain.	Joseph Sprissler . . . . .	Feb. 19, 1909.	Completed Jan. 31, 1910.	Single team, \$2.90; double team, \$4.45; extra men, \$2.	\$840.42
1 Furnishing single and double teams and extra men in Paving, Sanitary, Sewer and Street Cleaning Diversions, in District Nos. 6 and 9, Dorchester and Ashmont.	John J. Loonie . . . . .	Feb. 27, 1909.	Completed Jan. 31, 1910.	Single team, \$3.20; double team, \$4.50; extra men, \$2.	968.90
1 Leasing Chestnut Hill avenue ledge lot, and quarrying and furnishing stone on streets in Brighton.	Rowe Contracting Company, Blodgett & Wmddden . . . . .	March 19, 1909 May 14, 1900.	Unfinished.	Leasing plant, \$0.15 for 2,000 pounds, quarried and crushed. Stone delivered, \$0.95 per 2,000 pounds.	16,003.61
1 Lease of a portion of Glendon Wharf and stable on said wharf.	Daniel E. Lynch . . . . .	May 26, 1909.	May 14, 1910.	\$33,000 per year and all taxes for ten years. . . . .	1,000.00
1 Building retaining wall on Florence street at the Mt. Hope Station.	Simpson Brothers Corporation.	July 19, 1909.	Completed Nov. 17, 1909.	\$2,200. . . . .	530.86
2 Otisfield street, Roxbury, relaying tar concrete pavement.	General Accident, Fire and Life Assurance Corporation, Ltd.	Sept. 9, 1909.	Completed Oct. 30, 1909.	\$259. . . . .	259.00
2 Insuring five automobiles against liability for personal injury.	Federal Insurance Company..	Sept. 10, 1909.	Expires Sept. 10, 1910.	\$162 per year.	
2 Insuring Reo automobile against fire and damage.	Federal Insurance Company..	Sept. 10, 1909.	Expires Sept. 10, 1910.	\$20 per year.	
2 Insuring Stevens-Duryea automobile against fire and damage.	William H. Ellis. . . . .	Oct. 20, 1909.	Expires Sept. 10, 1910.	\$36 per year.	
1 Rebuilding a part of Granite Bridge, Dorchester.			Completed Dec. 13, 1909.	\$2,393. . . . .	119.65

	Boston Bridge Works, Inc. . . .	Oct. 20, 1909.	Completed Feb. 3, 1910.	\$8,985. . . . .	9,157 47
	Boston Bridge Works, Inc. . . .	Oct. 29, 1909.	Completed April 27, 1910.	\$13,549 80. . . . .	10,613 03
	Jones & Meehan . . . . .	Nov. 13, 1909.	Completed July 6, 1910.	\$4,932. . . . .	5,041 16
1	Building an extension of the Ashmont Street and Dorchester Avenue Bridge.	Walworth Construction and Supply Company.	Completed May 18, 1910.	\$2,486 12. . . . .	2,685 17
2	Furnishing and installing machinery for draw span, Neponset Bridge.	Charles J. Jacobs Company . . .	Expires May 1, 1910.	District No. 4, \$0.42 per cubic yard District No. 5, \$0.45 per cubic yard	3,145 20
	Removing snow and ice in Snow Districts Nos. 4 and 5.	Joseph McGreevey . . . . .	Expires May 1, 1910.	\$0.37 per cubic yard. . . . .	1,214 71
†	Removing snow and ice in Snow District No. 3.	J. C. Coleman & Sons Company.	Expires May 1, 1910.	District No. 1, \$0.29 per cubic yard District No. 2, \$0.35 per cubic yard	3,258 66
‡	Removing snow and ice in Snow Districts Nos. 1 and 2.	P. J. Dinn & Co. . . . .	Completed March 5, 1910.	351 linear feet @ \$1.80 per foot. . . . .	633 60
	Furnish and erect iron fence on Florence street wall at the Mt. Hope Station.	Boston Bridge Works, Inc. . . .	Completed Sept. 30, 1910.	\$5,865. . . . .	6,786 26
	Building Toll Gate Way footbridge, West Roxbury.				

<sup>1</sup> Advertised and awarded to lowest bidder. <sup>2</sup> Without competition. <sup>3</sup> Invitation bids and awarded to second lowest bidder.

### Boston and Cambridge Bridges.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1910.
1 Repairing Western Avenue Bridge,	William H. Ellis. . . . .	Dec. 7, 1909.	Completed March 10, 1910.	\$3,214 50. . . . .	\$2,000 50

<sup>1</sup> Advertised and awarded to lowest bidder.

## APPENDIX C.

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REPORT OF THE DEPUTY SUPERINTENDENT  
OF LAMP DIVISION.

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BOSTON, MASS., January 31, 1911.

MR. LOUIS K. ROURKE,

*Superintendent of Streets:*

DEAR SIR,— The annual report of the Lamp Division for the year 1910 is herewith submitted.

This division has supervision of the lighting, care and maintenance of the various types of electric, gas and naphtha lamps in use by the city for illuminating the streets, alleys, parks and squares, the setting up of all new lamps in the streets and the placing of glass street signs and numbers in the lanterns.

There was appropriated for this division for the financial year ending January 31, 1911, the sum of \$730,000. The expenditures amounted to \$710,294.84, thus leaving a balance of \$19,705.16 unexpended.

The present contract with the Rising Sun Street Lighting Company was extended on February 1, 1910, for a period of six months, and on June 23, 1910, for a further period of six months. Invitations for bids for lighting such streets, parks and alleys as might be required with gas lamps were advertised at three different periods during the year, and the few tenders received each time, being considered too high, were rejected.

The use of naphtha lamps for street lighting purposes has been discontinued and for the few remaining gas and tungsten lamps have been substituted.

The work of installing the magnetite arc lamps in place of the Gilbert arc lamps has been continued from last year and practically completed. Several of the main thoroughfares, Blue Hill avenue, Talbot avenue and Freeport street, have been relighted with these lamps.

Additional arc lamps have been installed on the Public Garden, Marine Park, Columbus Avenue Playground

and Franklin Field upon the request of clergymen and others interested in the improvement of those localities.

The removal of unused lamp-posts that have obstructed the sidewalks and the removal of unused lamp bracket fixtures and pipes from buildings upon which they have caused a somewhat unsightly appearance for several years has been actively conducted, and but few of them now remain to be taken down.

During the year experimental lighting and extinguishing of gas lamps by means of automatic apparatus has been conducted. Two installations of impulse devices, consisting of forty-four of the Kilchman and fifty of the Momand type have been placed upon city lamp-posts in the South End district.

The result of the operation of these lamps from September 20 to December 16, 1910, inclusive, a period of eighty-seven days, is as follows:

Total number of lightings of Momand lamps . . . . .	4,350
Total number of lightings of Kilchman lamps . . . . .	3,828
Total number of extinctions of Momand lamps . . . . .	4,350
Total number of extinctions of Kilchman lamps . . . . .	3,828
Momand lamps not extinguished . . . . .	75 or $1\frac{2}{10}\frac{4}{0}$ per cent
Kilchman lamps not extinguished . . . . .	22 or $\frac{5}{10}\frac{7}{0}$ "
Momand lamps not lighted . . . . .	54 or $1\frac{7}{10}\frac{2}{0}$ "
Kilchman lamps not lighted . . . . .	52 or $1\frac{3}{10}\frac{5}{0}$ "
Total failures to light and extinguish (Momand) . . . . .	$1\frac{4}{10}\frac{3}{0}$ "
Total failures to light and extinguish (Kilchman) . . . . .	$\frac{9}{10}\frac{6}{0}$ "

The percentage of failures to operate is small, a little over 1 per cent for the total installation. The impulse wave has not failed to reach the apparatus at either lighting or extinguishing time during the above period, and the failure to light in many instances was caused by the pilot being out.

Two of this type of lamp were operated at a distance of about eight miles from the governor house of the gas company.

Several single lamp installations of other automatic devices of the clock type have been made and are being operated.

The number of inverted mantle gas lamps that were experimentally installed has been increased to eighty-two and at present are all of the Graetzin type of lamp. These lamps have given good service during the period that they have been in use.

The average cost of maintenance per lamp per annum for this type of lamp has been as follows:

3.32 mantles	.	.	.	.	.	.	.	.	\$0 415
.55 globe	.	.	.	.	.	.	.	.	275
.62 chimney	.	.	.	.	.	.	.	.	06
.14 burner	.	.	.	.	.	.	.	.	09
									_____
									\$0 84
13,605 feet gas at 78c.	.	.	.	.	.	.	.	.	10 61
Labor at \$2.25 per day	.	.	.	.	.	.	.	.	10 00
									_____
									\$21 45

This does not include interest on installation cost or depreciation on plant, which would amount to about \$1.18.

The work done by the division in the installation of new lamps, repairs and alterations of services and lamp-posts has been conducted as follows:

Two hundred twenty new single-mantle gas lamps have been installed and 7 relighted. Forty-two Graetzin, 95 impulse, and 11 new fire-alarm signal lamps have been added. One hundred forty-five new arc lamps have been installed, subdivided as follows: Magnetites, 123; flame, 7; Gilbert, 15. One Gilbert and 2 magnetite lamps have been relighted, and 1,102 Gilbert lamps have been changed to magnetite arc lamps. Two hundred sixty new tungsten lamps have been installed and 3 relighted. Arc lamps have been provided during the skating season at Wood Island Park, Jamaica Pond, Savin Hill and North Brighton. Three hundred fifty-two single mantle, 35 triple mantle, 119 naphtha lamps, 15 arc lamps and 2 carbon and 6 tungsten incandescent lamps have been discontinued and removed. Eighteen police lamps have been transferred and 14 carbon have been changed to tungsten lamps. Four lamp-posts have been removed and reset on account of building moving. The total number of lamps of all types installed during the year was 786; the total number of lamps discontinued 547, a total net increase of 239 lamps.

Changes in locations of 59 gas and 13 arc lamp-posts have been made for the better lighting of the street or on account of street construction. Sixty-eight tungsten, 212 gas, and 146 arc lamp-posts and 8 arc and 11 gas brackets have been set for the various types of lamps and 190 incandescent fixtures have been put up;

32 gas lamp-posts that were broken by teams or other causes were removed and new ones set. One hundred sixteen gas, 1 tungsten and 2 arc lamp-posts have been straightened. One hundred twenty-seven gas, 7 tungsten and 8 arc lamp-posts have been reset to line and grade. Two hundred twenty-three gas, 122 naphtha, and 7 arc lamp-posts have been removed from the streets. Two hundred seventy-eight gas brackets, 6 arc and 8 tungsten fixtures have been removed. Three lamp-posts and 1 gas bracket have been repaired. Two hundred ninety-five new service pipes have been laid and 634 have been removed and cut off from the main pipes. Six lamp services have been reconnected with new mains, and 39 renewed or relaid that were trapped or otherwise affected by street changes. Seventy-six leaks in service pipes were repaired, and 416 service pipes were cleared. Two hundred forty-four gas posts have been painted. Eight-two post extensions for inverted lamps have been erected and 40 old extensions removed. The number of glass signs placed in lanterns was 578, and also 233 numbers; 74 glass shades and 17 arc shields have been placed.

The tables showing the expenditures of the division, the total number of various types installed, the contract price paid per annum, the increase or decrease of the number of lamps, and copies of lighting contracts, etc., are annexed.

Respectfully submitted,

EDWARD C. WADE,

*Deputy Superintendent.*

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#### GAS LIGHTING.

There are 11,232 single mantle gas lamps in use, 95 double mantle lamps, 82 Graetzin inverted mantle lamps, 21 triple mantle gas, 95 impulse and 212 open-flame fire-alarm signal lamps.

The city furnishes and provides for the setting of the lamp-posts, has service pipes laid from the gas main to the top of the post, maintains all such pipes and posts in good condition and repair, furnishing the gas, contracts for lanterns, burners, other necessary equipment and labor for lighting and care.

The division pays for the cost of gas, lighting and care of the fire-alarm lamps, and the cost of repairs and setting up of posts is assumed by the Fire Department.

## Gas Lamps.

COMPANY.	District.	Number of Lamps.	Type of Lamp.	Rated Candle Power.	Gas Consumed per Hour.	Hours of Burning per Annum.	Cost of Gas per M.	Cost of Gas per Lamp per Annum.	Cost per Lamp for Lighting, Care and Repair per Annum.	Total Cost per Lamp.
Rising Sun Street Lighting Company.	Boston Co n s o l-i-dated.	10,196	Single mantle.	60	3 feet.	4,000	\$0.78	.....	.....	\$23 60
		16	Triple mantle.	180	9 feet.	4,000	.78	.....	.....	47 60
		95	Double mantle.	120	6 feet.	4,000	.78	.....	.....	35 20
		186	Open flame.	.....	4 feet.	4,000	.78	\$12 48	\$10 50	22 98
Rising Sun Street Lighting Company.	Charlestown.....	509	Single mantle.	60	3 feet.	4,000	.90	.....	.....	23 60
		13	Open flame.	.....	3 feet.	4,000	.90	10 80	10 50	21 30
		527	Single mantle.	60	3 feet.	4,000	.90	.....	.....	23 60
Rising Sun Street Lighting Company.	East Boston.....	5	Triple mantle.	180	9 feet.	4,000	.90	.....	.....	47 60
		13	Open flame.	.....	4 feet.	4,000	.90	14 40	10 50	24 50

## ELECTRIC LIGHTING.

There are 3,581 magnetite arc lamps, 31 "Thoran" or flame arc lamps, 399 Gilbert inclosed arc lamps, 1,214 tungsten lamps and 15 carbon filament lamps in use.

The companies provide and set the lamp-posts, furnish lamps, wires, cables and all other necessary equipment, and maintain them in good condition and repair.

(For Arc and Incandescent Lamps see page 282.)

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The following table shows the number of lamps of the various types in use on January 1, 1911, as compared with the number in use in January, 1910:

	January, 1911.	January, 1910.	Increase or Decrease.
Single mantle gas.....	11,232	11,357	—125
Double mantle gas.....	95	95	.....
Triple mantle gas.....	21	56	—35
Triple mantle police.....		18	—18
Inverted mantle gas.....	82	40	+42
Impulse gas.....	95	.....	+95
Fire-alarm.....	212	201	+11
Mantle naphtha.....		119	—119
Magnetite arc.....	3,581	2,358	+1,223
Gilbert arc.....	399	1,496	—1,097
Flame arc.....	31	24	+7
Incandescent tungsten.....	1,214	943	+271
Incandescent carbon.....	15	31	—16
Totals.....	16,977	16,738	+239

Arc Lamps.

COMPANY.	Number of Lamps.	Connected.	Type of Lamp.	Type of Circuit.	WATTS,		Lighting Hours.	Cost per Lamp per Annum.
					At Terminal.	At Arc.		
Edison Electric Illuminating Company . . . . .	1,791	Overhead.	Magnetic.	Series 6.6 amp. D. C.	500	487	3,828	\$103 54
	1,790	Underground.	Magnetic.	Series 6.6 amp. D. C.	500	487	3,828	103 54
	30	Overhead.	Gilbert.	Series 6.6 amp. D. C.	500	483	3,828	92 39
	96	Underground.	Gilbert.	Series 6.6 amp. D. C.	500	483	3,828	92 39
	3	Overhead.	Flame.	Series 6.6 amp. D. C.	500	480	3,828	156 27
	28	Underground.	Flame.	Series 6.6 amp. D. C.	500	480	3,828	156 27
	230	Overhead.	Gilbert.	Series 6.6 amp. D. C.	500	483	3,828	92 39
Charlestown Gas and Electric Company . . . . .	43	Underground.	Gilbert.	Series 6.6 amp. D. C.	500	483	3,828	92 39

## Incandescent Lamps.

COMPANY.	Number of Lamps,	Type of Lamp.	Type of Circuit.	Watts.	Candle Power.	Lighting Hours.	Cost per Lamp per Annun.
	333	Tungsten.	Series 6.6 amp. D. C.	50	40	3,828	\$19 35
	719	Tungsten.	Series 6.6 amp. D. C.	75	60	3,828	22 31
	1	Tungsten.	Series 6.6 amp. D. C.	100	80	3,828	27 85
Edison Electric Illuminating Company.....	73	Tungsten.	Multiple 113 volts.	50	40	3,828	19 35
	88	Tungsten.	Multiple 113 volts.	75	60	3,828	22 31
	15	Carbon.	Multiple 113 volts.	.....	16	Meter.	.....

The following tables show the location by wards and the number of new street lamps erected during the year:

New Gas Lamps Erected and Lighted.

LOCATION.	Ward.	Number of Lamps.
Hooten court.....	2	1
Ipswich place.....	2	1
Lowland place.....	2	1
London street.....	2	1
Monument street.....	3	1
Lexington street.....	3	1
Main street.....	4	1
Lee place.....	5	1
Little place.....	6	1
North Hudson street.....	6	1
Hull street.....	6	1
Adams place.....	8	1
Bridge court.....	8	1
Leverett street.....	8	1
Poplar court.....	8	1
Pike alley.....	8	1
Public Alley No. 15.....	8	1
Staniford place.....	8	1
Hawthorn place.....	9	1
Charles river square.....	11	3
Coburn court.....	11	1
Canton street.....	12	1
Baldwin place.....	13	1
Athens street.....	13	11
Baldwin street.....	13	1
Page's court.....	13	1
Clapp court.....	14	1
Dexter place.....	15	1
Baker avenue.....	16	2
Cawfield street.....	16	2
Emrose terrace .....	16	2
Hooper avenue.....	16	2
Dacia terrace.....	16	2
Monadnock street.....	16	2
Albion street.....	17	1
Frawley street.....	19	1
Foxwell place.....	19	1
Feid place.....	19	1
Halleck street.....	19	1
Kempton street.....	19	1
Leon street.....	19	1
Wensley street.....	19	1
Belfort street.....	20	1
Thane street.....	20	1
Kingsdale street.....	20	2
Victoria street .....	20	1
Wave avenue.....	20	1
Westwood street.....	20	1
Allerton road.....	20	1
Dunkeld street.....	20	2
Elmo street.....	20	2

New Gas Lamps Erected and Lighted.—*Continued.*

LOCATION.	Ward.	Number of Lamps.
Fox street.....	20	1
Hallam street.....	20	2
Kilton street.....	20	6
Marie street.....	20	3
Rock terrace.....	20	1
Radcliffe street.....	20	1
Brookledge street.....	21	1
Howland street.....	21	3
Maywood street.....	21	1
Townsend street.....	21	1
Waverly street.....	21	2
Broughton street.....	22	2
Sheridan street.....	22	1
Fessenden street.....	22	2
Lasell street.....	23	4
Manthorn road.....	23	1
Metropolitan avenue.....	23	2
Patten street.....	23	1
Pelton street.....	23	1
Prince street.....	23	6
Richard street.....	23	8
Vista street.....	23	3
Water street.....	23	1
Basto street.....	23	3
Boxford terrace.....	23	1
Dunster road.....	23	6
Ethel street.....	23	3
Farquhar street.....	23	1
Guernsey street.....	23	1
Hillburn street.....	23	1
Houston street.....	23	1
Lena park.....	23	3
Abbott street.....	23	1
Augustus avenue.....	23	3
Alberta street.....	23	1
Burroughs place.....	23	1
Abbotsford terrace.....	24	1
Alabama street.....	24	3
Astoria street.....	24	2
Bernard street.....	24	3
Capen street.....	24	1
Clarkwood street.....	24	1
Almont street.....	24	5
Delhi street.....	24	5
Dyer street.....	24	1
Fessenden street.....	24	1
Flint street.....	24	1
Gordon place.....	24	1
Green Hill street.....	24	1
Havelock street.....	24	3
Hollingsworth street.....	24	2
Jones avenue.....	24	2
Mapes street.....	24	7
Mildred street.....	24	1
Rich street.....	24	1

New Gas Lamps Erected and Lighted.—*Concluded.*

LOCATION.	Ward.	Number of Lamps.
Richview street.....	24	2
Temple street.....	24	2
Torrey street.....	24	1
Whitman street.....	24	1
Wilcock street.....	24	3
Dustin street.....	25	1
Crescent avenue.....	25	3
Heinlein place.....	25	1
Lincoln place.....	25	1
Long road.....	25	1
Princeton avenue.....	25	4
Richardson street.....	25	1
Spofford road.....	25	2
Serriells place.....	25	1
Vineland street.....	25	1
Wadsworth street.....	25	2

## New Fire-alarm Signal Lamps Erected and Lighted.

LOCATION.	Ward.	Number of Lamps.
Water street, corner Gray street.....	5	1
Hanover street, corner Portland street.....	6	1
Atlantic avenue, at India Wharf.....	7	1
Massachusetts avenue, corner Boylston street.....	11	1
Dorchester avenue, corner Dorset street.....	16	1
Dorchester avenue, corner Crescent avenue.....	20	1
Dorchester avenue, corner Savin Hill avenue.....	20	1
Dorchester avenue, corner East street.....	20	1
Dorchester avenue, near Ellsworth street.....	20	1
Dorchester avenue, near Adams street.....	20	1
Dorchester avenue, corner Park street.....	24	1

## New Flame Arc Lamps Erected and Lighted.

LOCATION.	Ward.	Number of Lamps.
Marine Park.....	14	1
Blue Hill avenue.....	17	1
Sheridan square.....	17	1
Columbus Avenue Playground.....	18	1
Roxbury Crossing.....	19	1
Franklin Field.....	24	2

## New Graetzin Lamps Erected and Lighted.

LOCATION.	Ward.	Number of Lamps.
Alveston street.....	22	2
Elm street.....	22	4
Grovenor road.....	22	4
Harris avenue.....	22	3
Myrtle street.....	22	4
Roanoke avenue.....	22	5
Aldworth street.....	23	3
Burroughs court.....	23	1
Burroughs place.....	23	1
Hagar street.....	23	2
Orchard street.....	23	7
Park place.....	23	1
Thomas street.....	23	3
Williams terrace.....	23	2

## New Impulse Gas Lamps Erected and Lighted.

LOCATION.	Ward.	Number of Lamps.
Claremont park.....	12	3
Concord square.....	12	1
East Concord street.....	12	1
East Springfield street.....	12	5
Greenwich park.....	12	1
Harrison avenue.....	12	2
Newland street.....	12	2
Pembroke street.....	12	8
Rutland street.....	12	7
Rutland square.....	12	10
Stoughton street.....	12	2
West Concord street.....	12	10
West Newton street.....	12	15
West Springfield street.....	12	14
West Springfield street, rear of.....	12	2
Wellington street.....	12	1
Wellington street, rear of.....	12	1
Worcester street.....	12	8
Worcester street, rear of.....	12	2

## New Magnetite Arc Lamps Erected and Lighted.

LOCATION.	Ward.	Number of Lamps.
Chelsea street.....	1	1
Sumner street.....	2	1
Hartford street.....	7	1
La Grange street.....	7	1
Tremont street.....	7	1
Washington street.....	9	1
Dover street.....	9	1
Cortes street.....	10	2
Gainsborough street.....	10	1
Public Garden.....	11	10
Washington street.....	12	1
D street, at gymnasium.....	13	1
C street.....	13	1
Marine Park.....	14	3
Old Colony avenue.....	15	8
East Cottage street.....	16	1
Hunneman street.....	17	1
Mt. Pleasant avenue.....	17	1
Columbus Avenue Playground.....	18	1
Avenue Louis Pasteur.....	19	7
St. Alphonsus street.....	19	1
Parker street.....	19	1
Edgar street.....	19	1
Parker Hill avenue.....	19	1
Bowdoin street.....	20	1
Lyndehurst street.....	20	1
Park Street Playground.....	20	1
Washington street.....	20	1
Seaver street.....	21	1
Brookside avenue .....	22	2
Dimock street.....	22	1
Arborway.....	23	1
Hyde Park avenue.....	23	2
Walk Hill street .....	23	1
Adams street.....	24	1
Blue Hill avenue.....	24	27
Franklin Field.....	24	1
Bowling Green.....	24	2
Lauriat avenue.....	24	1
Talbot avenue.....	24	14
Freeport street.....	24	14
Washington street.....	24	2

## New Gilbert Arc Lamps Erected and Lighted.

LOCATION.	Ward.	Number of Lamps.
Front street.....	5	6
Glen road.....	23	9

## New Tungsten Lamps Erected and Lighted.

LOCATION.	Ward.	Number of Lamps.
Overlook street.....	1	1
Bowdoin street.....	6	2
Board alley.....	6	1
Commercial Wharf, north.....	6	1
Commercial Wharf, south.....	6	6
Ferry street and Ferry court.....	6	2
Fulton court.....	6	1
Keith's alley.....	6	2
Langdon place.....	6	1
Land's court.....	6	1
Marsh lane.....	6	1
Marshall street.....	6	1
Mahoney square.....	6	1
Mechanic street.....	6	3
North street.....	6	1
North Centre street.....	6	3
North Market street.....	6	8
Public Alley 102.....	6	2
Quincy place.....	6	1
Richmond street.....	6	1
Scott alley.....	6	1
South Market street.....	6	9
Hartford place.....	7	2
Charlesbank park.....	8	4
Allen court.....	8	1
Public Alley 901.....	10	5
Back street.....	11	41
Bay State road, rear of.....	11	19
Parkway court.....	11	2
Sherwin street, rear of.....	11	5
College alley.....	12	2
D street.....	13	2
West Ninth street.....	13	1
Bird street.....	16	1
Kemp street.....	16	1
Prentiss street.....	19	1
Page court.....	21	1
Baker street.....	23	9
Goethe road.....	23	4
La Grange street.....	23	17
Carroll road.....	23	2
Tollgate Footbridge.....	23	4
Weld street .....	23	40
Whiting street.....	23	4
Cedar street.....	24	5
Cedar place.....	24	1
Edgewater drive.....	24	2
Freeport street.....	24	7
Washington street.....	24	1
Arlington place.....	25	3
Faneuil Station.....	25	1
Grant place.....	25	3
Leamington court.....	25	3
Lawrence street.....	25	2
Idlewild park.....	25	4
Smith street.....	25	6
Smith court .....	25	1
Smith place.....	25	1
Upton court.....	25	2

## LIGHTING SCHEDULES.

The following tables show the time of lighting and extinguishing the lamps for the different months of the year:

## Electric Lighting Schedule.

*January.*

	START. (P. M.)	Stop. (A. M.)	Number Hours Burning.
Jan.	1..4.50.....	Jan. 2..6.24.....	13.34
	2..4.51.....	3..6.24.....	13.33
	3..4.52.....	4..6.24.....	13.32
	4..4.53.....	5..6.24.....	13.31
	5..4.54.....	6..6.24.....	13.30
	6..4.55.....	7..6.24.....	13.29
	7..4.56.....	8..6.23.....	13.27
	8..4.57.....	9..6.23.....	13.26
	9..4.58.....	10..6.23.....	13.25
	10..4.59.....	11..6.23.....	13.24
	11..5.00.....	12..6.23.....	13.23
	12..5.01.....	13..6.22.....	13.21
	13..5.02.....	14..6.21.....	13.19
	14..5.03.....	15..6.21.....	13.18
	15..5.05.....	16..6.21.....	13.16
	16..5.06.....	17..6.20.....	13.14
	17..5.07.....	18..6.20.....	13.13
	18..5.08.....	19..6.19.....	13.11
	19..5.09.....	20..6.19.....	13.10
	20..5.11.....	21..6.19.....	13.08
	21..5.12.....	22..6.17.....	13.05
	22..5.13.....	23..6.17.....	13.04
	23..5.14.....	24..6.16.....	13.02
	24..5.16.....	25..6.16.....	13.00
	25..5.17.....	26..6.14.....	12.57
	26..5.18.....	27..6.13.....	12.55
	27..5.19.....	28..6.12.....	12.53
	28..5.21.....	29..6.11.....	12.50
	29..5.22.....	30..6.10.....	12.48
	30..5.23.....	31..6.09.....	12.46
	31..5.25.....	Feb. 1..6.08.....	12.43

Total..... 409 hrs. 27 min.

## Electric Lighting Schedule.—Continued.

February.

START. (P. M.)	Stop. (A. M.)	Number Hours Burning.
Feb. 1..5.26.....	Feb. 2..6.07.....	12.41
2..5.27.....	3..6.06.....	12.39
3..5.29.....	4..6.06.....	12.37
4..5.30.....	5..6.05.....	12.35
5..5.31.....	6..6.04.....	12.33
6..5.33.....	7..6.02.....	12.29
7..5.34.....	8..6.01.....	12.27
8..5.35.....	9..6.00.....	12.25
9..5.36.....	10..5.59.....	12.23
10..5.38.....	11..5.57.....	12.19
11..5.39.....	12..5.56.....	12.17
12..5.40.....	13..5.55.....	12.15
13..5.42.....	14..5.53.....	12.11
14..5.43.....	15..5.52.....	12.09
15..5.44.....	16..5.51.....	12.07
16..5.46.....	17..5.49.....	12.03
17..5.47.....	18..5.48.....	12.01
18..5.48.....	19..5.46.....	11.58
19..5.49.....	20..5.45.....	11.56
20..5.51.....	21..5.43.....	11.52
21..5.52.....	22..5.42.....	11.50
22..5.53.....	23..5.40.....	11.47
23..5.54.....	24..5.39.....	11.45
24..5.56.....	25..5.37.....	11.41
25..5.57.....	26..5.36.....	11.39
26..5.58.....	27..5.34.....	11.36
27..5.59.....	28..5.33.....	11.34
28..6.01.....	29..5.30.....	11.29
29..6.01.....	March 1..5.30.....	11.29
Regular year total.....		339 hrs. 18 min.
Leap year total.....		350 hrs. 47 min.

March.

(P. M.)	(A. M.)	
March 1..6.02.....	March 2..5.28.....	11.26
2..6.03.....	3..5.27.....	11.24
3..6.04.....	4..5.26.....	11.22
4..6.05.....	5..5.24.....	11.19
5..6.07.....	6..5.22.....	11.15
6..6.08.....	7..5.21.....	11.13
7..6.09.....	8..5.19.....	11.10
8..6.10.....	9..5.17.....	11.07
9..6.11.....	10..5.15.....	11.04
10..6.12.....	11..5.14.....	11.02
11..6.14.....	12..5.12.....	10.58
12..6.15.....	13..5.10.....	10.55
13..6.16.....	14..5.09.....	10.53
14..6.17.....	15..5.06.....	10.49
15..6.18.....	16..5.05.....	10.47

## Electric Lighting Schedule.—Continued.

March.—Concluded.

START. (P. M.)	Stop. (A. M.)	Number Hours Burning.
March 16..6.19.....	March 17..5.03.....	10.44
17..6.20.....	18..5.02.....	10.42
18..6.22.....	19..5.00.....	10.38
19..6.23.....	20..4.58.....	10.35
20..6.24.....	21..4.56.....	10.32
21..6.25.....	22..4.55.....	10.30
22..6.26.....	23..4.53.....	10.27
23..6.28.....	24..4.51.....	10.23
24..6.29.....	25..4.49.....	10.20
25..6.30.....	26..4.47.....	10.17
26..6.31.....	27..4.46.....	10.15
27..6.32.....	28..4.45.....	10.13
28..6.33.....	29..4.42.....	10.09
29..6.34.....	30..4.40.....	10.06
30..6.35.....	31..4.39.....	10.04
31..6.37.....	April 1..4.37.....	10.00

Total..... 332 hrs. 39 min.

## April.

START. (P. M.)	Stop. (A. M.)	Number Hours Burning.
April 1..6.38.....	April 2..4.35.....	9.57
2..6.39.....	3..4.33.....	9.54
3..6.40.....	4..4.32.....	9.52
4..6.41.....	5..4.30.....	9.49
5..6.42.....	6..4.29.....	9.47
6..6.43.....	7..4.27.....	9.44
7..6.44.....	8..4.25.....	9.41
8..6.45.....	9..4.24.....	9.39
9..6.47.....	10..4.22.....	9.35
10..6.48.....	11..4.21.....	9.33
11..6.49.....	12..4.18.....	9.29
12..6.50.....	13..4.17.....	9.27
13..6.51.....	14..4.15.....	9.24
14..6.52.....	15..4.14.....	9.22
15..6.53.....	16..4.12.....	9.19
16..6.54.....	17..4.10.....	9.16
17..6.55.....	18..4.09.....	9.14
18..6.57.....	19..4.08.....	9.11
19..6.58.....	20..4.05.....	9.07
20..6.59.....	21..4.04.....	9.05
21..7.00.....	22..4.03.....	9.03
22..7.01.....	23..4.01.....	9.00
23..7.02.....	24..3.59.....	8.57
24..7.03.....	25..3.58.....	8.55
25..7.04.....	26..3.57.....	8.53
26..7.06.....	27..3.56.....	8.50
27..7.07.....	28..3.54.....	8.47
28..7.08.....	29..3.52.....	8.44
29..7.09.....	30..3.51.....	8.42
30..7.10.....	May 1..3.49.....	8.39

Total..... 278 hrs. 55 min.

## Electric Lighting Schedule.—Continued.

*May.*

	START. (P. M.)	Stop. (A. M.)	Number Hours Burning.
May	1..7.11.....	May 2..3.48.....	8.37
	2..7.12.....	3..3.47.....	8.35
	3..7.13.....	4..3.46.....	8.33
	4..7.14.....	5..3.45.....	8.31
	5..7.15.....	6..3.43.....	8.28
	6..7.17.....	7..3.42.....	8.25
	7..7.18.....	8..3.41.....	8.23
	8..7.19.....	9..3.39.....	8.20
	9..7.20.....	10..3.38.....	8.18
	10..7.21.....	11..3.37.....	8.16
	11..7.22.....	12..3.36.....	8.14
	12..7.23.....	13..3.35.....	8.12
	13..7.24.....	14..3.34.....	8.10
	14..7.25.....	15..3.34.....	8.09
	15..7.26.....	16..3.32.....	8.06
	16..7.27.....	17..3.31.....	8.04
	17..7.28.....	18..3.30.....	8.02
	18..7.29.....	19..3.29.....	8.00
	19..7.30.....	20..3.28.....	7.58
	20..7.31.....	21..3.27.....	7.56
	21..7.32.....	22..3.26.....	7.54
	22..7.33.....	23..3.26.....	7.53
	23..7.34.....	24..3.25.....	7.51
	24..7.35.....	25..3.24.....	7.49
	25..7.36.....	26..3.23.....	7.47
	26..7.37.....	27..3.23.....	7.46
	27..7.38.....	28..3.22.....	7.44
	28..7.39.....	29..3.21.....	7.42
	29..7.39.....	30..3.21.....	7.42
	30..7.40.....	31..3.20.....	7.40
	31..7.41.....	June 1..3.20.....	7.39

Total..... 250 hrs. 44 min.

*June.*

	(P. M.)	(A. M.)	
June	1..7.42.....	June 2..3.19.....	7.37
	2..7.42.....	3..3.19.....	7.37
	3..7.43.....	4..3.19.....	7.36
	4..7.44.....	5..3.19.....	7.35
	5..7.45.....	6..3.18.....	7.33
	6..7.46.....	7..3.17.....	7.31
	7..7.46.....	8..3.17.....	7.31
	8..7.47.....	9..3.17.....	7.30
	9..7.47.....	10..3.17.....	7.30
	10..7.48.....	11..3.17.....	7.29
	11..7.49.....	12..3.17.....	7.28
	12..7.49.....	13..3.17.....	7.28

## Electric Lighting Schedule.—Continued.

*June.*—Concluded.

	START.	Stop.	Number Hours Burning.
	(P. M.)	(A. M.)	
June	13..7.49.....	June 14..3.17.....	7.28
	14..7.50.....	15..3.17.....	7.27
	15..7.50.....	16..3.17.....	7.27
	16..7.51.....	17..3.17.....	7.26
	17..7.51.....	18..3.17.....	7.26
	18..7.52.....	19..3.17.....	7.25
	19..7.52.....	20..3.17.....	7.25
	20..7.52.....	21..3.17.....	7.25
	21..7.52.....	22..3.17.....	7.25
	22..7.52.....	23..3.18.....	7.26
	23..7.53.....	24..3.18.....	7.25
	24..7.53.....	25..3.19.....	7.26
	25..7.53.....	26..3.19.....	7.26
	26..7.53.....	27..3.19.....	7.26
	27..7.53.....	28..3.20.....	7.27
	28..7.53.....	29..3.20.....	7.27
	29..7.53.....	30..3.20.....	7.27
	30..7.53.....	July 1..3.21.....	7.28

Total..... 224 hrs. 17 min.

*July.*

	(P. M.)	(A. M.)	
July	1..7.53.....	July 2..3.21.....	7.28
	2..7.52.....	3..3.22.....	7.30
	3..7.52.....	4..3.23.....	7.31
	4..7.52.....	5..3.23.....	7.31
	5..7.52.....	6..3.24.....	7.32
	6..7.52.....	7..3.24.....	7.32
	7..7.51.....	8..3.25.....	7.34
	8..7.51.....	9..3.26.....	7.35
	9..7.50.....	10..3.27.....	7.37
	10..7.50.....	11..3.27.....	7.37
	11..7.50.....	12..3.28.....	7.38
	12..7.49.....	13..3.29.....	7.40
	13..7.49.....	14..3.30.....	7.41
	14..7.48.....	15..3.30.....	7.42
	15..7.47.....	16..3.31.....	7.44
	16..7.47.....	17..3.32.....	7.45
	17..7.46.....	18..3.33.....	7.47
	18..7.46.....	19..3.34.....	7.48
	19..7.45.....	20..3.35.....	7.50
	20..7.44.....	21..3.36.....	7.52
	21..7.43.....	22..3.37.....	7.54
	22..7.42.....	23..3.37.....	7.55
	23..7.41.....	24..3.38.....	7.57
	24..7.41.....	25..3.39.....	7.58
	25..7.40.....	26..3.40.....	8.00

## Electric Lighting Schedule.—Continued.

July.—Concluded.

	START. (P. M.)	Stop. (A. M.)	Number Hours Burning.
July	26..7.39.....	July 27..3.41..... 28..3.43..... 29..3.43..... 30..3.45..... 31..3.46.....	8.02
	27..7.38.....		8.05
	28..7.37.....		8.06
	29..7.36.....		8.09
	30..7.35.....		8.11
	31..7.33.....		8.13

Total..... 241 hrs. 24 min.

## August.

	(P. M.)	(A. M.)		
Aug.	1..7.32.....	Aug. 2..3.47..... 3..3.49..... 4..3.50..... 5..3.51..... 6..3.52..... 7..3.53..... 8..3.54..... 9..3.56..... 10..3.56..... 11..3.57..... 12..3.59..... 13..3.59..... 14..4.00..... 15..4.01..... 16..4.02..... 17..4.03..... 18..4.04..... 19..4.06..... 20..4.06..... 21..4.08..... 22..4.09..... 23..4.10..... 24..4.11..... 25..4.12..... 26..4.13..... 27..4.14..... 28..4.15..... 29..4.17..... 30..4.17..... 31..4.18.....	8.15 8.18 8.20 8.22 8.24 8.27 8.29 8.32 8.34 8.36 8.39 8.41 8.43 8.45 8.48 8.50 8.53 8.56 8.58 9.01 9.04 9.06 9.09 9.11 9.14 9.17 9.19 9.23 9.25 9.27 9.30	
	2..7.31.....			
	3..7.30.....			
	4..7.29.....			
	5..7.28.....			
	6..7.26.....			
	7..7.25.....			
	8..7.24.....			
	9..7.22.....			
	10..7.21.....			
	11..7.20.....			
	12..7.18.....			
	13..7.17.....			
	14..7.16.....			
	15..7.14.....			
	16..7.13.....			
	17..7.11.....			
	18..7.10.....			
	19..7.08.....			
	20..7.07.....			
	21..7.05.....			
	22..7.04.....			
	23..7.02.....			
	24..7.01.....			
	25..6.59.....			
	26..6.57.....			
	27..6.56.....			
	28..6.54.....			
	29..6.52.....			
	30..6.51.....			
	31..6.49.....			

Total..... 274 hrs. 36 min.

## Electric Lighting Schedule.—Continued.

*September.*

START. (P. M.)	Stop. (A. M.)	Number Hours Burning.
Sept. 1..6.47.....	Sept. 2..4.20.....	9.33
	3..4.21.....	9.35
	4..4.22.....	9.38
	5..4.23.....	9.41
	6..4.25.....	9.45
	7..4.26.....	9.47
	8..4.27.....	9.50
	9..4.28.....	9.53
	10..4.29.....	9.56
	11..4.30.....	9.58
	12..4.32.....	10.02
	13..4.32.....	10.04
	14..4.33.....	10.06
	15..4.34.....	10.09
	16..4.35.....	10.12
	17..4.36.....	10.15
	18..4.37.....	10.17
	19..4.38.....	10.20
	20..4.39.....	10.23
	21..4.41.....	10.27
	22..4.42.....	10.30
	23..4.43.....	10.32
	24..4.44.....	10.35
	25..4.45.....	10.38
	26..4.46.....	10.41
	27..4.48.....	10.44
	28..4.48.....	10.46
	29..4.49.....	10.49
	30..4.51.....	10.53
30..5.57.....	Oct. 1..4.51.....	10.54

Total..... 306 hrs. 53 min.

*October.*

(P. M.)	(A. M.)	
Oct. 1..5.55.....	Oct. 2..4.52.....	10.57
	3..4.54.....	11.01
	4..4.55.....	11.04
	5..4.56.....	11.06
	6..4.57.....	11.09
	7..4.58.....	11.12
	8..4.59.....	11.15
	9..5.00.....	11.17
	10..5.01.....	11.20
	11..5.02.....	11.22
	12..5.04.....	11.26
	13..5.05.....	11.29
	14..5.06.....	11.31

## Electric Lighting Schedule.—Continued.

October.—Concluded.

	START. (P. M.)	Stop. (A. M.)	Number Hours Burning.
Oct.	14..5.33.....	Oct. 15..5.07.....	11.34
	15..5.31.....	16..5.08.....	11.37
	16..5.30.....	17..5.10.....	11.40
	17..5.28.....	18..5.11.....	11.43
	18..5.27.....	19..5.12.....	11.45
	19..5.25.....	20..5.13.....	11.48
	20..5.23.....	21..5.14.....	11.51
	21..5.22.....	22..5.15.....	11.53
	22..5.20.....	23..5.17.....	11.57
	23..5.19.....	24..5.18.....	11.59
	24..5.18.....	25..5.19.....	12.01
	25..5.16.....	26..5.20.....	12.04
	26..5.15.....	27..5.22.....	12.07
	27..5.13.....	28..5.23.....	12.10
	28..5.12.....	29..5.24.....	12.12
	29..5.10.....	30..5.25.....	12.15
	30..5.09.....	31..5.26.....	12.17
	31..5.08.....	Nov. 1..5.27.....	12.19

Total..... 361 hrs. 21 min.

## November.

	(P. M.)	(A. M.)	
Nov.	1..5.06.....	Nov. 2..5.29.....	12.23
	2..5.05.....	3..5.30.....	12.25
	3..5.04.....	4..5.32.....	12.28
	4..5.03.....	5..5.33.....	12.30
	5..5.02.....	6..5.34.....	12.32
	6..5.00.....	7..5.35.....	12.35
	7..4.59.....	8..5.36.....	12.37
	8..4.58.....	9..5.38.....	12.40
	9..4.57.....	10..5.39.....	12.42
	10..4.56.....	11..5.40.....	12.44
	11..4.55.....	12..5.42.....	12.47
	12..4.54.....	13..5.43.....	12.49
	13..4.53.....	14..5.44.....	12.51
	14..4.52.....	15..5.45.....	12.53
	15..4.51.....	16..5.46.....	12.55
	16..4.50.....	17..5.48.....	12.58
	17..4.49.....	18..5.49.....	13.00
	18..4.49.....	19..5.50.....	13.01
	19..4.48.....	20..5.51.....	13.03
	20..4.47.....	21..5.52.....	13.05
	21..4.46.....	22..5.54.....	13.08
	22..4.45.....	23..5.55.....	13.10
	23..4.45.....	24..5.56.....	13.11

## Electric Lighting Schedule.—Concluded.

November.—Concluded.

START. (P. M.)	Stop. (A. M.)	Number Hours Burning.
Nov. 24..4.44.....	Nov. 25..5.57.....	13.13
25..4.43.....	26..5.58.....	13.15
26..4.43.....	27..6.00.....	13.17
27..4.42.....	28..6.01.....	13.19
28..4.42.....	29..6.02.....	13.20
29..4.42.....	30..6.03.....	13.21
30..4.41.....	Dec. 1..6.04.....	13.23

Total..... 387 hrs. 35 min.

## December.

(P. M.)	(A. M.)	
Dec. 1..4.41.....	Dec. 2..6.05.....	13.24
2..4.41.....	3..6.06.....	13.25
3..4.40.....	4..6.07.....	13.27
4..4.40.....	5..6.08.....	13.28
5..4.40.....	6..6.09.....	13.29
6..4.40.....	7..6.10.....	13.30
7..4.40.....	8..6.11.....	13.31
8..4.40.....	9..6.12.....	13.32
9..4.40.....	10..6.13.....	13.33
10..4.40.....	11..6.14.....	13.34
11..4.40.....	12..6.15.....	13.35
12..4.40.....	13..6.15.....	13.35
13..4.40.....	14..6.16.....	13.36
14..4.40.....	15..6.16.....	13.36
15..4.40.....	16..6.17.....	13.37
16..4.41.....	17..6.18.....	13.37
17..4.41.....	18..6.19.....	13.38
18..4.41.....	19..6.19.....	13.38
19..4.42.....	20..6.20.....	13.38
20..4.42.....	21..6.21.....	13.39
21..4.42.....	22..6.21.....	13.39
22..4.43.....	23..6.22.....	13.39
23..4.43.....	24..6.22.....	13.39
24..4.44.....	25..6.22.....	13.38
25..4.45.....	26..6.22.....	13.37
26..4.45.....	27..6.23.....	13.38
27..4.46.....	28..6.23.....	13.37
28..4.47.....	29..6.23.....	13.36
29..4.47.....	30..6.23.....	13.36
30..4.48.....	31..6.23.....	13.35
31..4.49.....	Jan. 1..6.24.....	13.35

Total..... 420 hrs. 51 min.

Grand total, per annum..... 3,828 hrs.

## Gas Lighting Schedule.

	DATE.	Lighted At. P. M.	Put Out. A. M.	Number of Hours Burning.
January	10 to 14.....	4.15	6.00	13 $\frac{3}{4}$
	15 to 21.....	4.30	6.00	13 $\frac{1}{2}$
	22 to 31.....	4.45	6.00	13 $\frac{1}{4}$
February	1 to 4.....	4.45	6.00	13 $\frac{1}{4}$
	5 to 9.....	5.00	6.00	13
	10 to 11.....	5.00	6.00	13
	12 to 25.....	5.15	5.45	12 $\frac{1}{2}$
	26 to 28.....	5.30	5.30	12
March	1 to 9.....	5.30	5.30	12
	10 to 26.....	6.00	5.00	11
	27 to 31.....	6.15	4.30	10 $\frac{1}{4}$
April	1 to 9.....	6.15	4.30	10 $\frac{1}{4}$
	10 to 23.....	6.30	4.15	9 $\frac{3}{4}$
	24 to 30.....	6.45	4.00	9 $\frac{1}{4}$
May	1 to 6.....	6.45	4.00	9 $\frac{1}{4}$
	7 to 9.....	7.00	3.30	8 $\frac{1}{2}$
	10 to 21.....	7.00	3.30	8 $\frac{1}{2}$
	22 to 31.....	7.00	3.00	8
June	1 to 3.....	7.00	3.00	8
	4 to 9.....	7.15	3.00	7 $\frac{3}{4}$
	10 to 30.....	7.15	3.00	7 $\frac{3}{4}$
July	1 to 9.....	7.15	3.00	7 $\frac{3}{4}$
	10 to 31.....	7.15	3.00	7 $\frac{3}{4}$
August	1 to 9.....	7.00	3.15	8 $\frac{1}{4}$
	10 to 21.....	7.00	3.15	8 $\frac{1}{4}$
	22 to 31.....	6.30	3.45	9 $\frac{1}{4}$
September	1 to 9.....	6.30	3.45	9 $\frac{1}{4}$
	10 to 11.....	6.30	3.45	9 $\frac{1}{4}$
	12 to 19.....	6.00	4.00	10
	20 to 30.....	5.45	4.15	10 $\frac{1}{2}$
October	1 to 9.....	5.30	4.30	11
	10 to 22.....	5.15	4.45	11 $\frac{1}{2}$
	23 to 31.....	4.45	5.00	12 $\frac{1}{4}$
November	1 to 9.....	4.30	5.00	12 $\frac{1}{2}$
	10 to 25.....	4.15	5.15	13
	26 to 30.....	4.15	5.45	13 $\frac{1}{2}$
December	1 to 9.....	4.00	5.45	13 $\frac{1}{2}$
	10 to 24.....	4.00	5.45	13 $\frac{3}{4}$
	25 to 31.....	4.15	6.00	13 $\frac{3}{4}$
January	1 to 9.....	4.15	6.00	13 $\frac{3}{4}$

## OUTAGES ON STREET LAMPS.

Outages for lamps not lighted on schedule time or out before the proper time were reported as follows: 19,186 arc outages, 5,996 tungsten outages, 1,727 gas outages and 62 naphtha outages — a total of 26,971.

Rebates have been received as follows on the various monthly bills:

DATE.	Naphtha.	Gas.	Electric.
February, 1910.....	\$7 44	\$31 77	\$4,153 22*
March.....	2 04	43 61	1,889 21*
April.....	32	18 57	634 65
May.....	16	6 99	249 71
June.....	1 08	3 01	143 18
July.....		3 43	122 74
August.....		3 95	195 85
September.....	64	3 36	202 09
October.....			290 17
November.....		6 92	128 73
December.....		8 10	317 23
January, 1911.....		10 09	214 03
Totals.....	\$11 68	\$139 80	\$8,541 71

\* Severe snow and sleet storm, December, 1909.

Underground.

	Set for New Lamps.	Set in Place of Broken Ones.	Shift to New Location.	Straight- ened.	Reset to Line and Grade.	Removed.	Repaired.	Laid.	Relaid.	Recon- nected.	Cleared.	Extens- ions Put on Posts.
Gas posts.....	212	32	59	116	127	223	3	.....	.....	.....	.....	82
Naphtha posts.....	.....	.....	.....	.....	.....	122	7	.....	.....	.....	.....	.....
Wire posts.....	146	.....	13	2	8	.....	.....	.....	.....	.....	.....	.....
Tungsten posts.....	68	.....	.....	1	7	.....	.....	.....	.....	.....	.....	.....
Gas brackets.....	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Incandescent fixtures.....	190	.....	.....	.....	.....	278	1	.....	.....	.....	.....	.....
Are fixtures.....	8	.....	.....	.....	.....	.....	8	.....	.....	.....	.....	.....
Fire-alarm posts.....	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Services.....	.....	.....	.....	.....	.....	634	76	295	33	6	416	.....

## EMPLOYEES.

There are ten men employed in the division as follows: Deputy superintendent, clerk, messenger, stenographer, four inspectors, one watchman and one lamplighter for inverted mantle lamps.

There are 127 lamplighters employed by the lighting company having the contract with the city.

## EXPENDITURES FOR YEAR 1910-11.

*Electric Lighting:**Arc.*

Edison Electric Il-				
luminating Com-				
pany . . . . .	\$361,686	31		
Charlestown Gas				
and Electric Com-				
pany . . . . .	24,799	45		
			\$386,485	76

*Incandescent.*

Edison Electric Il-				
luminating Com-				
pany . . . . .	\$22,371	76		
New York Central				
& Hudson River				
Railroad Com-				
pany . . . . .	42	32		
			22,414	08
			\$408,899	84

*Gas Lighting:*

Boston Consolidated Gas Com-				
pany . . . . .	\$3,439	81		
Charlestown Gas and Electric				
Company . . . . .	129	67		
East Boston Gas Company . . .	181	80		
Rising Sun Street Lighting Com-				
pany, lighting, care and gas . .	272,752	84		
City lighting and care . . . .	874	70		
			277,378	90

*Naphtha Lighting:*

Rising Sun Street Lighting Company . . . . .					1,833	28
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*Salaries and Wages:*

Deputy Superintendent and				
clerk . . . . .	\$3,800	00		
Inspectors . . . . .	3,311	29		

Carried forward . . . . .	\$7,111	29	\$688,112	02
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<i>Brought forward</i>	. . . . .	\$7,111 29	\$688,112 02
Messenger, stenographer, watchman	. . . . .	2,656 68	
			<u>9,767 97</u>
<i>Construction:</i>			
Underground work	. . . . .	\$4,192 52	
Wrought-iron work	. . . . .	360 25	
Electric changes	. . . . .	114 74	
Lamp-posts	. . . . .	600 00	
			<u>5,267 51</u>
<i>Experimental Gas Installation:</i>			
Automatic lighting apparatus	. . . . .	\$2,367 50	
Lanterns and fixtures	. . . . .	1,167 06	
Post extensions	. . . . .	339 26	
			<u>3,873 82</u>
<i>Photometric Tests, etc.:</i>			
Laboratory and street work	. . . . .	\$209 63	
Apparatus, etc.	. . . . .	21 81	
			<u>231 44</u>
<i>Horse Keeping:</i>			
Purchase and board	. . . . .	\$954 75	
Shoeing, repairs on harness and carriage	. . . . .	121 95	
			<u>1,076 70</u>
<i>Signs and Shades:</i>			
Glass signs and numbers	. . . . .	\$251 99	
Wooden signs	. . . . .	564 97	
Glass shades	. . . . .	75 00	
			<u>891 96</u>
<i>Printing, etc.:</i>			
Printing	. . . . .	\$428 23	
Postage	. . . . .	62 63	
Stationery and periodicals	. . . . .	128 54	
			<u>619 40</u>
Traveling expenses	. . . . .		214 20
Telephone	. . . . .		110 91
Plans	. . . . .		73 00
Advertising	. . . . .		40 40
Tools, etc.	. . . . .		15 51
			<u>\$710,294 84</u>

**REVENUE.**

Rent of shop	. . . . .	\$1,200 00
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## AGREEMENT FOR ELECTRIC STREET LIGHTING SERVICE.

The City of Boston, through its duly authorized representative, hereby applies to the Edison Electric Illuminating Company of Boston for all its electric street lighting service, to be rendered by said company pursuant hereto and subject to the terms and conditions annexed, all things to be furnished or done to the reasonable satisfaction of the Superintendent of Streets.

*Location of Lamps.*—As now installed in the City of Boston or as hereafter ordered in by the proper authority.

*Description of District Supplied.*—All parts of the City of Boston except those districts formerly Charlestown, Brighton and part of Brookline, and including those districts respectively, if and when said Edison Company shall, during the continuance of this agreement, purchase the electric distributing systems located therein.

*Description of Service:*

79	40 candle power incandescent lamps.						
205	60	"	"	"	"	"	"
2	80	"	"	"	"	"	"
0	425 watt A. C. arc lamps.						
3,183	*400 candle power Gilbert						
40	*800	"	"	magnetite	*500	"	D. C. " "
6	*1,600	"	"	General Electric	*500	"	D. C. " "

If the company shall, during the continuance of this agreement, purchase the existing electric distributing systems in either or any of those districts of the city above excepted, the public lamps then installed in said district or districts shall be added to the number of lamps as above applied for, or as afterwards increased, and shall come under the operation of this agreement; and the company will, upon demand, as soon as practicable thereafter, without charge to the city, substitute for such lamps other lamps of standard types.

The company shall substitute, without charge to the city, magnetite lamps for Gilbert lamps at a rate not exceeding 100 per week, and General Electric lamps for Gilbert lamps at a rate not exceeding 10 per week; such magnetite lamps, up to 1,200, to be installed upon standard twenty-five-foot poles and such General Electric lamps, up to 100, to be installed upon standard forty-foot poles; the remainder on the existing standard eighteen-foot poles; such changes to be made at the

above specified rate until not more than five hundred (500) Gilbert lamps remain in the territory covered by this contract and any extension thereof. In the application of the second clause of the 7th of the Terms and Conditions, hereto attached, one General Electric lamp shall be counted as equal to three Gilbert lamps or magnetite lamps.

The following is substituted for the provision for arbitration set out in the last clause of the 3d of the Terms and Conditions, viz.:

"At any time during the continuance of this agreement the city or the company may demand an investigation of the question,— whether the cost to the company, including depreciation and interest on investment, of furnishing the service to the city called for hereby is at the time of such investigation less than at the date of this agreement, and if so, how much. In determining that issue the investigators may take into consideration the cost to the company of any or all other parts of its supply and any other pertinent facts and conditions which they may deem important. Such investigation or investigations shall be made by the then head professors of applied electricity, by whatever titles known, of the Massachusetts Institute of Technology and the scientific department of Harvard University, if able and willing to serve. In case either is unable or unwilling to serve, his substitute shall be named by the then president of said institute or university, as the case may be. In case of any disagreement between said investigators they may call in an arbitrator of their own selection. The decision of said investigators, or of either of them and said arbitrator, shall be binding upon the city and the company until the Supreme Court of Massachusetts has decided that the constitutional rights of either are thereby infringed."

The following is substituted for the 5th of the Terms and Conditions hereto attached:

"The municipality may, at any time, by written notice, require the company to employ a competent and disinterested person connected with either the Massachusetts Institute of Technology or the Scientific department of Harvard University to examine and test the electrical currents and apparatus employed in

furnishing the lighting service herein provided for, to ascertain whether or not the company is complying with the terms of this agreement, and for such purpose such person may have access at all reasonable times to the lamps, poles, wires, fixtures and other apparatus of the company used in carrying out this agreement.

"In case two tests of any circuit or lamp shall be made, separated by an interval of not less than one hour, during any one night, and both of said tests shall prove that the company is not furnishing the electrical energy or light required by this agreement, then such circuit or such lamp shall be deemed to be outages, as provided herein. If such tests show that the company is not furnishing the electrical energy or light required by this agreement, the company shall pay the expense of the examination and test herein provided for; otherwise the municipality shall pay such expense."

If the city notifies the company within six months from the time when this contract becomes operative that it desires to extend the contract to a period of ten years, the company will make the rates under this contract the same as those proposed under a ten-year contract, that is, the discount to be ten per cent instead of five,—this discount to be retroactive from the date when the contract becomes operative, that is, the difference between the amount which shall have been paid under the discount of five per cent and the amount which would have been paid had the discount been ten per cent shall be deducted from subsequent payments. In event of such extension of the contract the limit placed upon the number of new poles to be installed for the magnetite and General Electric lamps is to be abolished.

And said municipality agrees to be bound by the street lighting terms and conditions of the company, printed herewith, except as aforesaid, and to pay the prices called for in the company's Schedule M C 5, printed herewith, until April 1, 1914, and thereafter until one year after written notice by either party to the other of its election to terminate this agreement, which notice may be given at any time after the beginning of the one-year period next preceding the expiration of the original period above fixed.

This agreement shall take effect as of April 1, 1909, and is subject to appropriations for street lighting. This

agreement is in substitution for and in place of a preceding agreement between the same parties dated April 1, 1909.

BOSTON, May 5, 1909.

(Signed) CITY OF BOSTON,

By GUY C. EMERSON,

*Superintendent of Streets.*

Approved May 7, 1909.

G. A. HIBBARD,

*Mayor of Boston, Mass.*

The foregoing application is hereby accepted upon the terms and for the period above specified.

THE EDISON ELECTRIC ILLUMINATING COMPANY  
OF BOSTON,

By CHARLES L. EDGAR,  
*President.*

BOSTON, May 5, 1909.

Form of contract and bond approved.

THOMAS M. BABSON,  
*Corporation Counsel.*

### YEARLY STREET LIGHTING RATES.

#### *Schedule M C 5.*

Electricity for street lighting use will be sold to municipalities under the street lighting terms and conditions as printed herewith, in accordance with the following table:

DESCRIPTION OF LAMP.	Fixed Costs per Lamp per Year.	Running Costs per Lamp-Hour.	B.
40 c. p.....	Inc. lamp \$10 80	1 cent	\$19 35
60 " .....	" 12 00	1 $\frac{1}{10}$ "	22 31
80 "	" 14 00	1 $\frac{1}{10}$ "	27 85
425 watt A. C.....	Arc lamp 36 00	1 $\frac{1}{10}$ cents	88 75
* 400 c. p. Gilbert *500 watt D. C.....	" 36 00	1 $\frac{1}{10}$ "	92 39
* 800 c. p. † magnetite *500 watt D. C.....	" 42 00	1 $\frac{1}{10}$ "	103 54
* 1,600 c. p. ‡ Gen. Elec. *500 watt D. C..	" 42 00	3 $\frac{1}{10}$ "	156 27 A

\* Average.

† This magnetite lamp gives twice the candle power of the Gilbert lamp at 25° below the horizontal.

‡ This General Electrical lamp gives four times the candle power of the Gilbert lamp at 25° below the horizontal.

A These running costs include the present cost to the company of electrodes (carbons) and trimming of General Electric lamps. If the costs to the company of these two items are reduced during the continuance of this agreement, corresponding reductions will be made to the municipality from time to time, but the running costs shall not thereby be reduced to less than 1 $\frac{1}{10}$  cents per lamp-hour.

B Total costs for 3,828 hours per year, after taking off a discount of 5 per cent.

*First Deduction.*— A rate of 1 cent per hour per incandescent lamp and 5 cents per hour per arc lamp will be allowed for all outages in any month, provided written notice of same is received by the company on or before the 5th of the succeeding month.

*Second Deduction.*— When agreements are made for periods longer than one year a discount of 1 per cent per year will be allowed for each year up to ten.

The Gilbert Standard lamp shall be operated at 6.6 amperes and a pressure of 76 volts at the terminals. There may be a permissible variation of 0.1 amperes and 5 volts from the above standard.

#### STREET LIGHTING TERMS AND CONDITIONS.

The foregoing agreement is subject to the following terms and conditions:

1. The lamps, poles, wires, fixtures and other apparatus, appliances and materials necessary for the performance of this agreement, except posts for incandescent lamps supplied from underground circuits, shall be furnished by the company and kept in good order and condition by it. The lamps shall give a clear and steady light. The company shall furnish electrodes (carbons) for and trim all arc lamps, and will renew incandescent lamps whenever they become dim, broken or burned out.

2. Payments hereunder shall be made monthly on the regular pay day of the municipality.

3. The company will give the municipality the benefit of any lower prices for service such as that herein provided for, or of any better quality or efficiency of service, which may at any time during the continuance of this agreement be enjoyed by any municipality served by it, such relative prices, quality and efficiency to be determined by taking into consideration all the circumstances and conditions in both cases. Upon written demand by the municipality the company shall thereafter give to the municipality the benefit of two-thirds of any general reduction in the present cost to the company, including depreciation and interest on investment, of supplying the service called for by this agreement, but only so long as and to the extent that such decreased cost shall continue. If at any time during the continuance of this agreement the company and the municipality shall disagree upon any matter embraced in this term and condition, it shall be referred

to the arbitration of three disinterested persons, selected one by the municipality, one by the company and the third by the other two, a decision of a majority of whom shall be binding upon the parties, provided the constitutional rights of either party shall not thereby be infringed.

4. The company will indemnify and save harmless the municipality against any and all claims for damages, loss, cost and expense on account of injury to persons or property arising in any way out of the erection, construction, maintenance or use of any of the lamps, poles, wires, fixtures and other apparatus and appliances furnished by the company hereunder, except where such injury is the result, in whole or in part, of the fault or neglect of the municipality, its officers, servants or agents, while acting as agents of the municipality; and against any and all claims for damages by reason of any alleged infringement of patent rights in the use of lamps, poles, wires, fixtures, machinery and other apparatus, appliances and material supplied by the company hereunder; and will, at its own expense, assume the defence of all actions at law or in equity which may be brought against the municipality upon any claims as aforesaid, and also against all decrees, judgments and orders of any court based thereon.

5. The municipality may at all times, with or without the company's knowledge, employ a competent person to examine and test the electrical currents and apparatus employed in furnishing the lighting service herein provided for, to ascertain whether or not the company is complying with the terms of this agreement, and for such purpose the company agrees that such person may have access at all reasonable times to said lamps, poles, wires, fixtures and other apparatus of the company used in carrying out this agreement.

The municipality will indemnify and save harmless the company against any and all claims for damages, loss, cost and expense on account of injury to persons or property arising in any way out of the employment, act or neglect of any such person, except such as may arise, in whole or in part, from the fault or neglect of the company, its agents or servants, while acting as agents of the company.

In case two tests of any circuit or lamp shall be made, separated by an interval of not less than one hour, during any one night, and both of said tests shall prove

that the company is not furnishing the electrical energy or light required by this agreement, then such circuit or such lamp shall be deemed to be outages as provided herein.

6. Such additional lamps shall be installed, without charge to the municipality, as may be designated by the municipality at any time before notice is given to terminate this agreement, provided the company shall not be required to extend its lines more than 400 feet overhead, or in localities served by underground construction more than 100 feet underground, to reach any lamp; but the municipality may require extension of lines for additional lamps at any time during the term of this agreement by paying the cost of so much of the extension as exceeds that herein required to be made by the company, such payments to apply as credits on future bills for lighting on such additional lines. Whenever requested by the municipality the company will change the location of any lamps at the expense of the municipality, not exceeding, however, \$5 for each arc lamp and \$3 for each incandescent lamp so moved, unless new lines or poles are required.

7. The discontinuance of any street or highway shall have the effect of discontinuing whatever lamps may have been located on such street or way. The municipality may at any time discontinue a lamp or lamps for reasonable cause, but the number of lamps of any type in service at any time shall not, except as hereinbelow provided, be less than 95 per cent of the maximum number of such lamps in service under this agreement at any time prior thereto. In case of such discontinuance the installation of any lamps at other locations shall be charged for the same as changes of locations under Article 6 hereof until the original number installed shall again have been reached. Lamps of any type may be substituted for lamps of any other type if the municipality pays the total expense of making the change and the total amount of payments by the municipality hereunder at the then standard rates is not thereby diminished.

8. Should the municipality at any time find that the company is not complying fully with the terms and requirements of this agreement, the municipality shall immediately notify the company of such fact, and the company shall at once remedy the fault, but failure to give such notice shall not impair any obligation of the

company. But the company shall not be responsible for any failure to supply electricity if such failure is without default or neglect on its part.

9. If the municipality shall at any time during the continuance of this agreement be required to purchase the whole or any part of the plant of the company located within the limits of said municipality, under the present law, or any amendment thereof, the municipality shall not be holden for the unexpired term of this agreement, nor shall this agreement or the unexpired term thereof be in any way considered as an element of value in such purchase; provided, however, that in case of such purchase the municipality shall not be entitled to the full discount provided for in this agreement unless it shall have been in operation for the full period thereof. If the agreement shall not have been in operation for the full period thereof, because of such purchase, the accounts between the municipality and the company shall be adjusted so as to make the total net payments by the municipality to the company what they would have been if the agreement had been made for the period during which it was actually in operation.

### CONTRACT.

#### FOR LIGHTING WITH GAS AND NAPHTHA INCANDESCENT MANTLE LAMPS CERTAIN STREETS, PARKS AND ALLEYS IN THE CITY OF BOSTON.

The City of Boston having herewith entered into a contract for lighting with gas and naphtha incandescent mantle lamps certain streets, parks and alleys in said city upon the conditions set forth in the annexed specifications, the undersigned Rising Sun Street Lighting Company, hereinafter referred to as the contractor, declares that the only persons interested in this contract as principals are named herein as such; that no official of the city, and no person acting for or employed by the city, is directly or indirectly interested therein, or in any contract which may be made thereunder, or in any expected profits to arise therefrom; the contractor has carefully examined the annexed specifications, and he hereby bids in accordance therewith and agrees to do all the work set forth in said specifications at the following prices:

*Schedule of Prices.*

KIND OF LAMP.	Price per Annum.	
Single gas incandescent burners.....	\$23 60	With gas.
Single gasolene or naphtha incandescent burners,	29 20	
A lantern with two gas incandescent burners ...	35 20	With gas.
A lantern with three gas incandescent burners..	47 60	With gas.
Lighting and care of open gas-flame fire-alarm signal lamps.....	10 50	Without gas.

The full names and residences of all the persons interested in this contract as principals are as follows:

Rising Sun Street Lighting Company, Boston, Mass.  
Peter J. Fitzgerald, *President and General Manager.*  
Robert J. Gove, *Treasurer.*

NOTICE.—Give first and last names in full, and in case of corporations give the names of president, treasurer and manager or local agent, if any.

The corporation is of the State of Maine.

The name and address of the surety company which will sign the bond are:

MASSACHUSETTS BONDING AND INSURANCE COMPANY.

Signed this twenty-sixth day of August, 1909.

Signature of contractor:

RISING SUN STREET LIGHTING COMPANY,  
PETER J. FITZGERALD,  
*President.*

Accepted. CITY OF BOSTON,

By GUY C. EMERSON,  
*Superintendent of Streets.*

Form of contract and bond approved.

JOHN D. McLAUGHLIN,  
*Acting Corporation Counsel.*

Approved September 2, 1909.

G. A. HIBBARD,  
*Mayor.*

### BOND.

The undersigned surety company binds itself, its successors and assigns, to pay to the City of Boston the sum of twenty-five thousand (25,000) dollars.

This obligation is upon the condition that if the party to the contract hereto annexed, therein called the contractor, shall faithfully perform the said contract in accordance with the terms thereof, and do everything of him therein required, and shall fully protect the city against any infringements of patents, or any other suits in connection with or growing out of the performance of said contract, then this obligation shall become of no effect. Otherwise it shall continue in full force.

Signed, sealed and delivered August 26, 1909.

The Corporation is of the State of Massachusetts.

The President is T. J. FALVEY.

The Treasurer is JOHN T. BURNETT.

The place of business in Boston is 77-85 State street.

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### SPECIFICATIONS.

1. By the city is meant the City of Boston, acting through the Superintendent of Streets or such subordinate or other officer as may have charge of street lighting in said city. By the contractor is meant the Rising Sun Street Lighting Company.

2. *Work to be Done.*—The work to be done under this contract shall consist of supplying all the material, labor and equipment necessary and required (except the posts and service pipes) to light with gas or naphtha incandescent lamps such streets, parks, alleys and public places as may from time to time be designated by the city during the continuance of this contract, from September 16, 1909, to January 31, 1910. He must also light, extinguish and keep clean such open-flame fire-alarm signal lamps as the city may from time to time establish.

3. *Plant to be Furnished by Contractor.*—The contractor must furnish his own plant to do the work, and the necessary equipment shall be placed upon such gas posts as may be furnished and from time to time indicated by the city. The said plant and all appurtenances so furnished by the contractor shall remain his property and must be removed by him at the expiration of the contract at his own expense.

If, in the opinion of the city, the contractor does not exercise due diligence, or if the materials or service furnished therefor are not to the satisfaction of the city, the city may give the contractor notice in writing of such dereliction, and then if the contractor fails within thirty days thereafter to obey any proper order of the city in connection with the work, the said superintendent, with the consent in writing of the Mayor, may declare the contract forfeited.

4. *Lamp-posts.*—The posts on which the contractor is to place and operate his lanterns will, together with the service pipes, be furnished by the city free of expense to the contractor. They shall be neatly painted by the contractor such color as the city may designate, and shall be repainted from time to time whenever, in the opinion of the city, it shall be deemed necessary. The posts must be kept free from dirt and must not be used for advertising purposes. The city will set, connect and keep the posts in good repair and plumb.

The contractor must furnish crossarms on such posts as the city may designate.

5. *Lanterns.*—The lanterns must be of boulevard pattern, and so constructed that the lights therein will be protected against insects and wind and weather.

6. *Burners and Mantles.*—The burners to be used must be first class in material and workmanship, furnishing at all times when in service a steady, clear, white light, free from smoke, of the required candle power.

If the burners shall not give continuously the required candle power they must be replaced by the contractor with burners that will. No incandescent mantle will be permitted to be used unless composed of the best material and standard weave and of first-class quality in all respects.

No incandescent mantle shall be used by the contractor which will shrink beyond reasonable dimensions from the standard required; and all broken, smoked or blackened, ragged or frayed mantles must be at once replaced with new mantles by the contractor.

7. *Time of Lighting.*—The lamps must be lighted and extinguished in accordance with a schedule to be furnished by the city, said schedule not to exceed four thousand burning hours per lamp per year. The lamps must be lighted within one hour from the time fixed in the schedule as the time for beginning, and must be

extinguished within one hour from the time fixed in the schedule as the time for beginning to extinguish.

In order that the city may determine whether the gas or naphtha lamps are lighted and extinguished in accordance with the official schedule or time table hereinbefore mentioned, the contractor shall furnish the said official with maps or lists showing the number and geographical location of each lamp in the district of each lamplighter, and designating the particular lamp at which each lamplighter commences to light and also the lamp at which he completes the lighting, and in extinguishing the lamps the lamplighter shall begin and finish at the same lamps as are designated for beginning and finishing points on any lamp district during the term of contract.

The lamplighters or other employees of the contractor will not be permitted to climb the lamp-posts for the purpose of lighting the lamps, or for any other purpose, except by use of a ladder.

For every light that does not burn continuously at the proper candle power throughout the hours prescribed each night a sum equal to  $\frac{2}{365}$  of the contract price, per lamp, per year, for each night's failure will be deducted from the amounts due the contractor and forfeited to the city. These "outs" will be reported by the Police Department at its respective police stations daily, in writing, open to the contractor, and shall be regarded as final and binding upon the contractor, errors proven or admitted excepted.

8. *Repairs and Maintenance.*—The contractor must at his own expense keep the entire plant in good repair and maintain same to the satisfaction of the city. Upon failure of the contractor to promptly make any and all necessary repairs (including repainting of lanterns and posts), the city may cause same to be done and deduct the cost thereof from any amounts that may become due to the contractor. All glass must be cleaned at least once a week, and oftener if necessary to do so, in order not to retard or diminish the candle power of the lamps. All broken or displaced glass, and all broken or defective mantles, must be replaced forthwith, and all street lamps must be constructed so that present signs may be attached, and shall, after each cleaning, be replaced, with the signs facing the proper street. All broken or displaced glass shall be removed forthwith by the contractor.

The contractor shall report, in writing, at the office of the official in charge of street lighting, on Thursday of each week, the number of each kind of lamps lighted on each of the preceding seven nights, and on the tenth day of each month the number of each kind lighted, as aforesaid, on each night subsequent to the last report, stating in each report the name of each person lighting the lamps, and the locations of any and all lamps added to or removed from the district of each lamplighter, and is to notify said official, in writing, of any damage to or repair needed to the posts or service pipes.

The contractor will be allowed the entire use of the Lamp Department shop, No. 690 Albany street, at a rent of \$100 per month.

9. *Removal of Lamps.*— Whenever ordered to do so by the city the contractor must change the location of lamps, weather permitting, from one place to another (posts to be furnished by the city ready to receive lamp), at his own cost and expense.

10. *New Lamps.*— The city may, from time to time, order the erection and maintenance of new or additional lamps, at such locations as it may deem proper, and it shall be the duty of the contractor, at his own cost and expense, to properly erect upon said posts furnished, placed and connected by the city, and put into operation, such additional lamps and maintain the same in all respects as called for in these specifications. All additional lamps ordered shall be put in service within ten days after they are ordered and posts set and connected, and notice that the same are in service shall be given by the contractor to the city.

11. *Discontinuance of Lamps.*— The city shall have the right to increase or diminish the number of lamps furnished under the contract, but, subject to the provisions of Section 14 of these specifications, it is understood that the total number of gas and naphtha lamps to be furnished under this contract shall not at any time be less than 10,000.

Naphtha or gasoline lamps may be changed to gas lamps at the discretion of the city, when the gas post and service connections are ready therefor. When orders to discontinue lamps are given, in accordance with the above, the contractor must put them out of service within five days, and notify the City of Boston in writing; payment for the same shall cease on such

discontinuance, and when the contractor removes a gas lantern without substituting another therefor he shall properly plug the service pipe so that the gas will not escape therefrom.

12. *Candle Power.*— All the burners, whether of gas, gasoline or naphtha, must be maintained continuously when in service at not less than sixty actual candle power. The city shall have the right at any time to test the lights in the usual accepted manner by standard photometric tests, and if there is found any deficiency the contractor must proceed at once to remedy the defects and raise the burners to the required candle power.

13. *Supply of Gas.*— The contractor shall furnish all the gas required for the lamps, and if at any time by reason of a reduction by any gas company in the price of gas the contractor shall procure his gas at a lower average price per lamp for the whole number of lamps lighted than the average price paid for gas by the contractor when the system provided for herein is fully installed, the rate paid by the city shall be reduced by the amount of the reduction in the price of gas so secured at and from the time of said reduction to the contractor.

14. *Extension of Contract.*— The city may, at its option, to be signified in writing not later than February 1, 1910, extend the term herein designated for the continuance of the contract for a period not exceeding six months, so that there may be no interruption of service in case the city enters into a new contract involving other parties or different equipment, or both. For this purpose the city may call upon the contractor, at any time within the last three months of the extended period, to discontinue the lighting of the entire area covered by his operations or of such parts thereof as the city may from time to time determine, provided, however, that such parts shall be so arranged that no fraction of any established lamplighter's route shall require lighting for a longer period than two nights and that not less than two weeks' notice shall be given the contractor in regard to each of such parts.

The contractor shall promptly remove his equipment from all posts on which lighting has been discontinued and cooperate with the city in recording the dates on which lighting ceased.

15. *Naphtha or Gasoline.*— The contractor shall

furnish all the gasolene or naphtha which may be necessary to supply incandescent mantle gasolene or naphtha street lamps at such locations as the city may from time to time direct and furnish with posts for the purpose.

The contractor will be required to supply each lamp each night with a sufficient quantity of gasolene or naphtha to insure the standard of light herein contracted for at all times during the hours of burning.

The gasolene or naphtha used in supplying the lamps must be of the very best grade, free from water, gum, glue or other impurities.

16. *Payments.*— Payment for the work performed under this contract shall be made by the city monthly, in the same manner as other city work is paid for, at the rates specified in the proposal and subject to appropriations.

17. *Miscellaneous.*— The contractor shall allow his employees to lodge, board and trade wheresoever and with whomsoever they may choose, and shall give preference in employment, first to citizens of the City of Boston, second to citizens of Massachusetts, and shall save the city and its agents and employees harmless from any and all claims against them or any of them arising from any act, omission or neglect of the contractor, his agents or employees in carrying on the contract, and no workman, laborer or mechanic employed on this work within the Commonwealth shall be requested or required to labor more than eight hours in any one calendar day.

Any assignment, subletting or otherwise permitting the work herein specified to be done by anyone other than the contractor, or encumbering the work or plant by mortgage or in any way, will be sufficient cause for the abrogation of the contract by the city.

## APPENDIX D.

## REPORT OF DEPUTY SUPERINTENDENT OF SANITARY DIVISION.

BOSTON, January 31, 1911.

MR. LOUIS K. ROURKE,

*Superintendent of Streets:*

DEAR SIR,— I respectfully submit the annual report of the expenditures, income and operation of the Sanitary Division (including the Sanitary and Street Cleaning and Watering Sections) of the Street Department for the year ending January 31, 1911.

Respectfully submitted,

GEORGE H. FOSS,

*Deputy Superintendent.*

## FINANCIAL STATEMENT.

Amount of appropriation . . . . .	\$1,280,000 00
Less amount unexpended . . . . .	25,526 05
Net amount of appropriation . . . . .	<u>\$1,254,473 95</u>
Total expenditures of the Sanitary Service, including work done for other divisions and paid for by them . . . . .	\$725,202 57
Less amount paid by other divisions, . . . . .	48,142 68
Net cost of maintenance, Sanitary Service . . . . .	\$677,059 89
Amount expended by Street Cleaning Service . . . . .	\$418,593 43
Revenue received . . . . .	4 14
Net cost of maintenance, Street Cleaning Service, . . . . .	418,589 29
Amount expended by Street Watering Service . . . . .	158,824 77
Net cost of maintenance, Sanitary Division . . . . .	<u>\$1,254,473 95</u>

## SANITARY SERVICE.

*Total Cost on House Dirt, Ashes, Waste and Rubbish and House Offal.*

Salaries, deputy superintendent and office force . . . . .	\$12,117 90
Office supplies and expenses . . . . .	6,483 08
Ashes, waste and rubbish account . . . . .	440,988 56
House offal account . . . . .	208,262 37
	<hr/>
	\$667,851 91

*Construction, Repair and Horseshoeing Account.*

Expended for labor . . . . .	37,632 88
Expended for stock . . . . .	19,717 78
	<hr/>

Total expenditures of the Sanitary Service for the fiscal year ending January 31, 1911 . . . . . \$725,202 57

*Revenue Received from Outside Divisions for Board and Care of Horses, Rent, Use of Dumping Boats, Shoeing and for Repairing Vehicles, etc.*

Bridge Service* . . . . .	\$538 57
Paving Service* . . . . .	12,235 38
Lamp Service . . . . .	1,364 52
Sewer Division . . . . .	3,518 39
Street Cleaning and Watering Service† . . . . .	30,422 37
Returned by the Superintendent of Streets . . . . .	63 45
	<hr/>
Net cost of maintenance, Sanitary Service . . . . .	\$48,142 68
	<hr/>

Net cost of maintenance, Sanitary Service . . . . . \$677,059 89

Amount of money deposited and bills presented to the City Collector during the year ending January 26, 1911, for general revenue:

*Money Deposited.*  
From letting of scow privileges . . . . . \$4,535 35

*Bills Presented.*  
For the collection of commercial ashes . . . . . \$10,614 50  
For rents, Fort Hill and Hecht's Wharves . . . . . 1,334 00  
For sale of manure . . . . . 224 57  

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*Carried forward* . . . . . \$12,173 07      \$4,535 35

<i>Brought forward</i>	. . .	\$12,173 07	\$4,535 35
For sale of old iron	. . .	296 32	
For sale of old offal wagon	. . .	20 00	
For forfeit on contract	. . .	100 00	
		12,589 39	
Total	. . .		<u>\$17,124 74</u>

## Items of Expenditure for the Year 1910-11.

ITEMS.	Total Amount Expended.
Salaries of deputy superintendent and office force . . . . .	\$12,117 90
Salaries of foremen . . . . .	8,336 53
Labor — collection and disposition of house dirt and ashes . . . . .	221,993 26
Labor — collection and disposition of waste and rubbish . . . . .	30,765 02
Labor — collection and disposition of house offal . . . . .	135,620 61
Labor and stock in stables and yards . . . . .	40,748 71
Hired teams on ashes, waste and rubbish and house offal . . . . .	27,074 08
Contracts on ashes — East Boston, Brighton, West Roxbury, North and South Dorchester . . . . .	44,977 48
Contracts on offal — East Boston, Brighton, West Roxbury and Dorchester . . . . .	30,377 65
Ash and offal stock . . . . .	457 85
Allowed time and holidays . . . . .	17,146 80
Grain . . . . .	24,889 05
Hay and straw . . . . .	23,338 14
Medical attendance and allowed time on account of injured men . . . . .	2,068 99
Horses . . . . .	5,307 50
Veterinary service and medicine . . . . .	2,716 44
Hired horses . . . . .	393 50
Outside board and care of horses . . . . .	524 62
Outside horseshoeing, blacksmith, wheelwright, harness and paint . . . . .	5,195 19
Labor, stock, etc., wheelwright, blacksmith, paint, harness and horseshoeing shops . . . . .	54,539 15
Dumping boats, stock, etc . . . . .	112 58
Repairs on stables, sheds, wharves and boats . . . . .	8,256 41
Fuel . . . . .	1,149 38
Gas . . . . .	858 18
Electric lighting and power . . . . .	1,280 27
Printing, stationery, office items and incidentals . . . . .	3,813 21
Automobile supplies and repairs . . . . .	2,078 71
Advertising . . . . .	360 29
Rents . . . . .	12,572 70
Tolls and fares . . . . .	71 09
Telephones . . . . .	1,024 11
Damages by city teams . . . . .	74 61
Taxes on Hecht's estate, as per lease . . . . .	4,967 56
Total . . . . .	\$725,202 57
Amounts paid by other departments and divisions . . . . .	48,142 68
Amount charged to the Sanitary Service . . . . .	\$677,059 89

*Construction and Repair Shops, 1910–11.*

For work done and material furnished for other divisions the different shops received as follows:

Wheelwright shop . . . . .	\$5,566 66
Blacksmith shop, South End . . . . .	5,550 65
Blacksmith shop, West End . . . . .	1,261 28
Paint shop . . . . .	5,337 20
Harness shop . . . . .	2,929 27
Horseshoeing shop, South End . . . . .	3,044 00
Horseshoeing shop, West End . . . . .	1,858 00
Horseshoeing shop, Roxbury . . . . .	73 50
	—————
	\$25,620 56

For work done and material furnished for the Sanitary Division the following amounts were expended by the different shops:

Wheelwright shop . . . . .	\$6,761 76
Blacksmith shop, South End . . . . .	6,371 36
Blacksmith shop, West End . . . . .	1,237 74
Paint shop . . . . .	4,106 79
Harness shop . . . . .	5,925 48
Horseshoeing shop, South End . . . . .	2,481 12
Horseshoeing shop, West End . . . . .	1,330 47
Horseshoeing shop, Roxbury . . . . .	703 87
	—————
	28,918 59

Total amount paid out, stock and labor, all divisions . . . . .	\$54,539 15
Allowed time and holidays . . . . .	\$2,370 01
Allowed time and medical attendance . . . . .	30 00
Expended for electric power . . . . .	411 50

————— 2,811 51

Total cost, maintenance of shops . . . . .	\$57,350 66
Income from other divisions . . . . .	25,620 56

————— \$31,730 10

*Detailed Account of Amounts Paid to the Sanitary Section  
During the Year Ending January 31, 1911.*

For official salaries . . . . .	\$3,164 20
For services of engineer . . . . .	785 00
For repair and construction work . . . . .	20,779 11
For horseshoeing . . . . .	5,198 25
For use of dumping boats . . . . .	9,541 00
For use of towboat . . . . .	167 97
For hay, straw and grain, board and care of horses, . . . . .	8,051 48
For feeders, stablemen and watchmen . . . . .	1,289 51
For fuel, light, etc. . . . .	806 48
For board and care of sick horses at veterinary hospital . . . . .	681 75
For rent of wharf, Atlantic avenue . . . . .	4,800 00
For labor and supervision, oiling and watering streets . . . . .	960 27
For labor and supervision, removing snow . . . . .	2,099 82
For use of horses, County of Suffolk . . . . .	241 00
For two horses, County of Suffolk . . . . .	575 00
For furnishings of prison van . . . . .	255 14
For printing, street cleaning and oiling . . . . .	69 88
Total income . . . . .	\$59,465 86

*Amounts Paid by the Sanitary Section to Other Divisions During the Year Ending January 31, 1911.*

To Street Cleaning and Watering Section, removing ashes . . . . .	\$4,518 26
To Street Cleaning and Watering Section, new horses . . . . .	4,062 50
To Street Cleaning and Watering Section, board and care of horses, . . . . .	461 78
To Street Cleaning and Watering Section, carpenter labor . . . . .	54 00
To Street Cleaning and Watering Section, repairing catch-basin . . . . .	27 87
Net income . . . . .	<u>\$50,341 45</u>

## Horseshoeing by Divisions.

KINDS AND STYLES.	SANITARY DIVISION.		Sewer Division.	Highway Division.	Lamp Division.	County of Suffolk.	Total.
	Sanitary Section.	Street Cleaning and Watering Section.					
Plain shoes.....	8,345	5,378	850	58	80	129	14,840
Bar shoes.....	139	89	73	.....	.....	38	339
Leathers.....	4,794	2,876	367	2	14	48	8,101
Resets.....	1,160	862	123	7	11	25	2,188
Pads.....	355	376	83	38	46	92	990
Springs.....	18	21	.....	1	.....	.....	40

Average cost per shoe, 42 cents.

## Cost of Horseshoeing.

	Division Shops.	Outside Shops.
Stock.....	\$3,600 34	\$4,566 50
Labor.....	5,890 62	
Totals.....	\$9,490 96	\$4,566 50

Amount Expended for the Collection and Disposal of House Dirt, Ashes, Waste and Rubbish and House Offal, by Districts, Including Labor, Stock, Etc.

Districts.	Popula- tion.	ASHES,		OFFAL.		WASTE AND RUBBISH.		Total Cost. per Capita.	Total Cost.	Total Cost per Capita.
		Cost.	Cost per Capita.	Cost.	Cost per Capita.	Cost.	Cost per Capita.			
1. South Boston.....	75,000	\$25,830	.09	\$0 3444	\$13,958	.05	\$0 1861	\$351 00	\$0 0047	\$40,139 14
2. East Boston.....	59,000	13,807	.59	0 2340	6,078	.92	0 1031	.....	.....	19,886 51
3. Charlestown.....	42,000	23,104	.56	0 5501	9,295	.93	0 2213	79 89	0 0019	32,480 38
4. Brighton.....	27,000	8,270	.53	0 3063	4,576	.40	0 1695	.....	.....	12,846 93
5. West Roxbury.....	45,000	21,078	.08	0 4684	9,462	.30	0 2103	117 00	0 0026	30,657 38
6. Dorchester.....	117,000	37,572	.88	0 3211	22,616	.91	0 1933	.....	.....	60,189 79
7. Roxbury.....	123,000	58,470	.54	0 4753	33,580	.84	0 2730	2,319 56	0 0189	94,370 14
8 and 9. South End and Back Bay.....	106,000	98,279	.73	0 9271	42,013	.45	0 3964	19,525 30	0 1842	159,818 48
10. North and West Ends.....	80,000	64,706	.62	0 8088	12,853	.62	0 1607	9,656 42	0 1207	87,216 66
11. Dumping boats.....	.....	32,989	.96	.....	53,826	.75	.....	24,828 81	.....	111,645 52
Totals.....	674,000	\$384,110	.58	.....	.....	.....	.....	\$56,877 98	.....	\$649,250 93

STREET DEPARTMENT — SANITARY DIVISION. 325

Force Employed on House Dirt and Ashes January 31, 1911.

CITY FORCE.	Number.	Hired Teams.	CONTRACTORS' TEAMS.					Total.
			East Boston	Brighton.	West Roxbury.	North Dorchester.	South Dorchester,	
Inspectors.....	27	...	...	...	...	...	...	27
Teamsters.....	124	15	5	9	3	10	10	176
Helpers.....	124	15	12	11	5	25	19	211
Dumpers.....	20	...	...	...	...	...	...	20
Totals.....	295	30	17	20	8	35	29	434

Amount of House Dirt and Ashes Removed.

YEARS.	Loads.	Cubic Yards.	Tons.
1906.....	352,124	704,248	281,699
1907.....	377,058	754,116	301,647
1908.....	339,913	745,918	311,586
1909.....	299,071	692,865	311,791
1910.....	*284,343	746,585	335,997

\* Includes 51,598 double loads.

Force Employed on Waste and Rubbish January 31, 1911.

CITY FORCE.	Number.
Inspectors.....	2
Teamsters.....	11
Helpers.....	20
Total.....	33

Amount of Waste and Rubbish Removed.

YEARS.	LOADS.		Cubic Yards.	Tons.
	Paper Carts.	Market Wagons.		
1906.....	6,271	11,133	125,281	12,836
1907.....	6,098	11,071	112,960	12,708
1908.....	5,892	10,346	123,830	13,566
1909.....	5,556	7,397	99,975	10,916
1910.....	5,655	8,370	112,801	12,328

## Force Employed on House Offal January 31, 1911.

CITY FORCE.	Number.	CONTRACTORS' TEAMS.				Total.
		East Boston.	Brighton.	West Roxbury.	Dorchester.	
Inspectors.....	12	.....	.....	.....	.....	12
Teamsters.....	51	4	5	3	9	72
Helpers.....	50	4	5	3	14	76
Dumpers.....	4	.....	.....	.....	.....	4
Totals.....	117	8	10	6	23	164

## Amount of Garbage Removed.

YEARS.	Loads.	Cubic Yards.	Tons.
1906.....	65,387	130,774	65,387
1907.....	64,712	129,424	64,712
1908.....	62,892	125,784	78,615
1909.....	54,747	105,595	68,636
1910.....	*48,610	97,651	63,451

\* Includes 8,389 double loads.

## Number of Loads of Material Collected from February 1, 1905, to January 28, 1911.

YEARS.	Ashes.	Garbage.	Rubbish.	Total Loads.	Tons.
1905.....	331,545	64,803	17,109	413,457	334,426
1906.....	352,124	65,387	17,404	434,915	359,922
1907.....	377,058	64,712	17,169	458,939	379,067
1908.....	339,913	62,892	16,238	*419,043	403,767
1909*.....	299,071	54,747	12,953	366,771	391,343
1910†.....	284,343	48,610	14,025	†346,978	411,776

\* Decrease in number of loads due to increase in carrying capacity of carts.

† Decrease in number of loads due to use of double carts.

## Average Number of Employees and Horses Cared for by the Sanitary Section.

Average number of employees for 1910.....	.....	562
Average number of horses, Sanitary Section.....	236	
Average number of hired horses.....	1	
Average number of all other horses.....	41	
Average number of horses fed by the Sanitary Section.....	.....	278

**Capacity of Carts and Wagons in Use by the Sanitary Section.**

	Cubic Feet.		Cubic Feet.
Single ash carts . . . . .	63	Single offal wagons . . . . .	52
Double ash carts . . . . .	162	Double offal wagons . . . . .	85
Paper carts . . . . .	200	Paper wagons . . . . .	270

**Average Weight of Loads.**

	/	Pounds.
Single ash carts.....		2,200
Double ash carts.....		3,100
Single offal wagons.....		2,300
Double offal wagons.....		4,100
Paper carts.....		1,400
Paper wagons.....		2,000

**Loads Collected by Contractors.**

DISTRICT.	ASH LOADS.			Paper Wagons.	Cubic Yards.	TONS.		Total Tons Ashes and Paper.
	Single.	Double.	Cubic Yards.			Ashes.	Paper.	
East Boston.....	12,814	44,133	.....	.....	.....	19,862	.....	19,862
Brighton.....	6,199	4,403	30,317	310	2,836	13,644	310	13,954
West Roxbury....	120	7,146	24,904	.....	.....	11,208	.....	11,208
North Dorchester..	3,927	15,144	102,654	.....	.....	46,199	.....	46,199
South Dorchester ..	11,875			.....	.....	.....	.....	.....
Totals.....	10,246	51,382	202,008	310	2,836	90,913	310	91,223

	OFFAL LOADS.				SUMMARY.		
	Single.	Double.	Cubic Yards.	Tons.	Material.	Cubic Yards.	Tons.
East Boston.....	1,478	4,663	3,030	Ashes.....	202,008	90,913	
Brighton.....	1,662	5,243	3,407	Offal.....	27,633	17,955	
West Roxbury.....	847	2,672	1,736	Paper.....	2,836	310	
Dorchester.....	659	4,402	15,055	9,782	.....	.....	.....
Totals.....	659	8,389	27,633	17,955	Totals....	232,477	109,178

## Loads and Tonnage of Material Collected, by Districts.

CLASS OF REFUSE.	1. South Boston.	2. East Boston.	3. Charlestown.	4. Brighton.	5. West Roxbury.	6. Dorchester.	7. Roxbury.	8-9. South End and Back Bay.	10. North and West Ends.	Total Loads.	Total Tons. (2,000 pounds.)
House dirt and ashes.....{	22,309	12,814	14,982	10,602	19,983	30,946	36,527	73,811	62,369	284,343	335,997
	24,540	19,862	16,577	13,644	25,197	46,199	40,180	81,192	68,606	.....	
Offal.....{	3,732	1,478	2,051	1,662	3,379	5,061	8,220	16,308	6,719	48,610	63,451
	4,292	3,030	2,358	3,407	4,648	9,782	9,453	18,754	7,727	.....	
Waste and rubbish.....{	208	.....	29	310	54	.....	664	7,300	5,460	14,025	12,328
	208	.....	29	310	54	.....	664	6,672	4,392	.....	
Totals { Loads.....	26,249	14,292	17,062	12,574	23,416	36,007	45,411	97,419	74,548	346,978	
Tons.....	29,040	22,892	18,963	17,361	29,899	55,981	50,297	106,618	80,725	.....	411,776

NOTE.—First item, loads. Second item, tons.

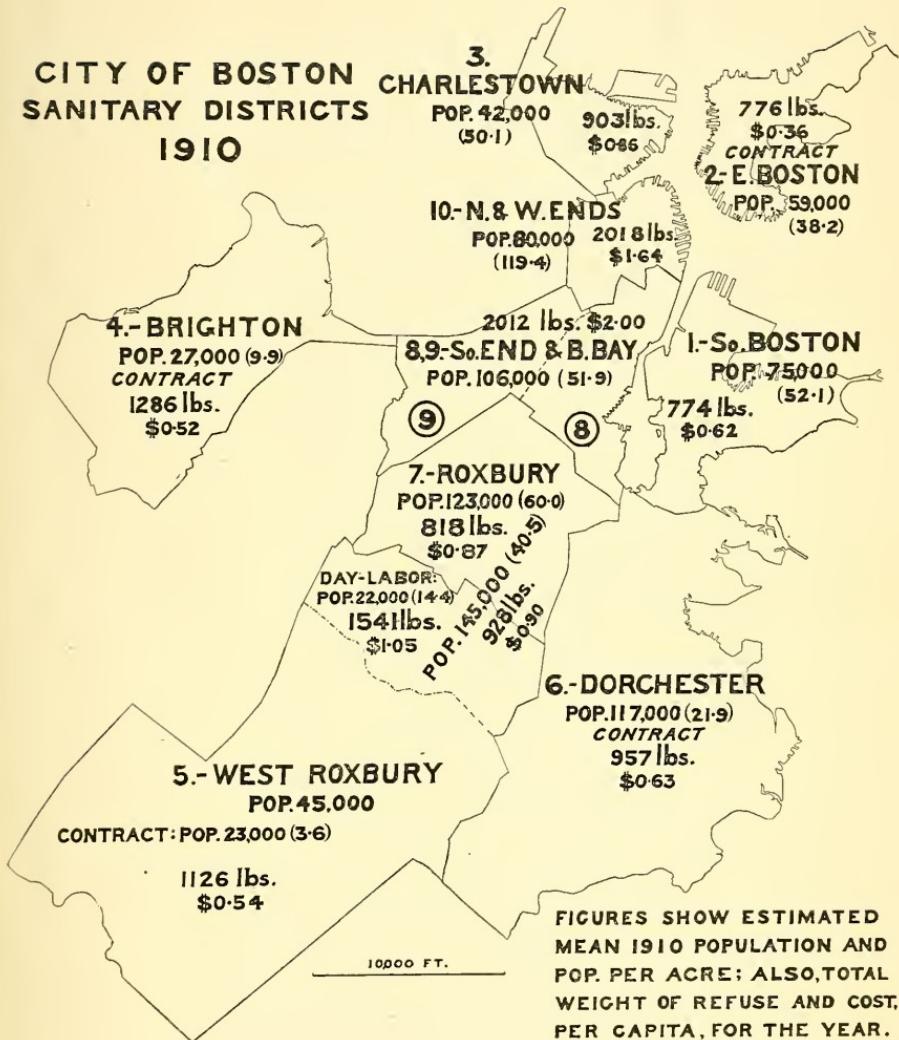
## Final Disposition of all Material, in Loads and Tons (2,000 pounds), Collected by the Sanitary Section from January 28, 1910, to January 26, 1911, Inclusive.

CLASS OF REFUSE.	Deposited on Low Lands.	Towed to Sea.	Plant of the New England Sanitary Product Company.	Plant of the City Refuse Utilization Company.	Collected by Contractors and Disposed of by Them.	Total Number of Loads Disposed of.	Total Tons. (2,000 pounds.)
House dirt and ashes.....{	123,163	99,552	.....	.....	61,628	284,343	
	135,556	109,528	.....	.....	90,913	.....	335,997
Offal.....{	.....	.....	44,623	.....	3,987	48,610	
	.....	.....	55,278	.....	8,173	.....	63,451
Waste and rubbish.....{	1,766	*4,973	.....	11,949	310	18,998	
	1,688	*4,973	.....	10,330	310	.....	17,301
Cesspool dirt.....{	.....	2,124	.....	.....	.....	2,124	
	.....	2,655	.....	.....	.....	.....	2,655
Street sweepings.....{	.....	35,652	.....	.....	.....	35,652	
	.....	44,565	.....	.....	.....	.....	44,565
Miscellaneous dirt.....{	.....	3,939	.....	.....	.....	3,939	
	.....	3,151	.....	.....	.....	.....	3,151
Totals { Loads.....	124,929	146,240	44,623	11,949	65,925	393,666	
Tons.....	136,792	164,872	55,278	10,330	99,396	.....	467,120

NOTE.—First item, loads. Second item, tons.

\*4,973 loads (4,973 tons) of barrel refuse delivered at dumping boats.

**CITY OF BOSTON  
SANITARY DISTRICTS  
1910**







## Cost of Collection and Disposal of Refuse by Day Labor Force in the City of Boston for the Year 1910-11.

District and Pop- ulation.	CHARACTER OF REFUSE.	Tons. (2,000 lbs.)	Total Tons.	COST PER TON BY DISTRICTS.			COST BY DISTRICTS.						WHERE DISPOSED OF.
				To Collect.	For Disposal.	Total Collection and Disposal.	To Collect.	Total Cost to Collect.	For Disposal.	Total Cost of Disposal.	Total Cost of Collection and Disposal.	Total Cost per Capita, Collection and Disposal.	
1. (75,000)	Mixed refuse, principally ashes (no kitchen wastes)...	24,540	.....	\$1 0690	\$0 0506	\$1 1196	\$26,234 39	.....	\$1,240 56	.....	.....	.....	To inland dumps.
	Garbage, principally kitchen wastes.....	4,292	.....	3 3103	0 9831	4 2934	14,207 55	.....	4,219 63	.....	.....	.....	New England Sanitary Product Company.*
	Store refuse, principally paper.....	208	29,040	1 7476	0 3937	2 1413	363 50	.....	81 89	.....	.....	.....	28 tons to City Refuse Utilization Company; * 180 tons to inland dumps.
3. (42,000)	Mixed refuse, principally ashes (no kitchen wastes)...	16,577	.....	\$1 2751	\$0 1840	\$1 4591	\$21,137 83	.....	\$3,050 67	.....	.....	.....	To inland dumps.
	Garbage, principally kitchen wastes.....	2,358	.....	4 0004	0 9831	4 9835	9,432 93	.....	2,318 15	.....	.....	.....	New England Sanitary Product Company.*
	Store refuse, principally paper.....	28	18,963	2 9104	3 7011	6 6105	81 49	.....	103 63	.....	.....	.....	City Refuse Utilization Company.*
5 (part) and 7. (145,000)	Mixed refuse, principally ashes (no kitchen wastes)...	54,169	.....	\$1 2249	\$0 1487	\$1 3736	\$66,352 88	.....	\$8,054 18	.....	.....	.....	To inland dumps.
	Garbage, principally kitchen wastes.....	12,365	.....	3 3096	0 9831	4 2927	40,923 93	.....	12,155 58	.....	.....	.....	New England Sanitary Product Company.*
	Store refuse, principally paper.....	718	67,252	3 3318	0 2609	3 5927	2,392 22	.....	187 32	.....	.....	.....	To inland dumps.
8 and 9. (106,000)	Mixed refuse, principally ashes (no kitchen wastes)...	81,192	.....	\$1 1666	\$0 2620	\$1 4286	\$94,716 59	.....	\$21,270 11	.....	.....	.....	40,270 tons to inland dumps; 40,992 tons to sea.
	Garbage, principally kitchen wastes.....	18,754	.....	2 0805	1 2011	3 2816	39,017 31	.....	22,525 34	.....	.....	.....	New England Sanitary Product Company.*
	Store refuse, principally paper.....	6,672	106,618	2 9399	2 1885	5 1284	19,615 05	.....	14,601 38	.....	.....	.....	5,882 tons to City Refuse Utilization Company; * 790 tons to inland dumps.
10. (80,000)	Mixed refuse, principally ashes (no kitchen wastes)...	68,606	.....	\$0 9982	\$0 3137	\$1 3119	\$68,482 76	.....	\$21,520 45	.....	.....	.....	To sea.
	Garbage, principally kitchen wastes.....	7,727	.....	1 7217	0 9831	2 7048	13,303 32	.....	7,596 21	.....	.....	.....	New England Sanitary Product Company.*
	Store refuse, principally paper.....	4,392	80,725	2 2567	2 4130	4 6697	9,911 62	.....	10,597 67	.....	.....	.....	City Refuse Utilization Company.*
448,000	Totals.....	302,598	Av. \$1 4084	Av. \$0 4280	Av. \$1 8304	.....	\$426,173 37	.....	.....	\$129,522 77	\$555,696 14	\$1 2403	.....

\* Contracts for disposal.

Total, as above..... \$555,696 14

Add total of contract table (page 329)..... 121,363 75

Net amount of appropriation..... \$677,059 89

Cost of Collection and Disposal of Refuse by Contract in the City of Boston for the Year 1910-11.

Contract Districts and Population.	Character of Refuse.	Tons (2,000 lbs.)	Total Tons.	Cost per Ton by Districts, Collection and Disposal.	Cost by Districts.			Where Disposed of.
					Cost.	Total Cost.	Total Cost per Capita.	
(59,000) . . .	Mixed refuse, principally ashes (no kitchen wastes) . . . . .	19,862	.....	\$0 7627	\$15,148 30	.....	.....	Inland dumps.
	Garbage, principally kitchen wastes . . . . .	3,030	22,892	2 0738	6,283 55	\$21,431 85	\$0 3633	Inland dumps.*
(27,000) . . .	Mixed refuse, principally ashes (no kitchen wastes) . . . . .	13,644	.....	\$0 6737	\$9,192 10	.....	.....	Inland dumps.
	Garbage, principally kitchen wastes . . . . .	3,407	.....	1 4108	4,806 46	.....	.....	Inland dumps.*
(part) (23,000)	Store refuse, principally paper . . . . .	310	17,361	0 0676	20 95	14,019 51	0 5192	Inland dumps.
	Mixed refuse, principally ashes (no kitchen wastes) . . . . .	11,208	.....	\$0 8075	.....	.....	.....	Inland dumps.
(117,000) . . .	Garbage, principally kitchen wastes . . . . .	1,736	12,944	1 7023	2,945 14	12,416 98	0 5398	Inland dumps.*
	Mixed refuse, principally ashes (no kitchen wastes) . . . . .	46,199	.....	\$0 9593	.....	.....	.....	Inland dumps.
226,000	Garbage, principally kitchen wastes . . . . .	9,782	55,981	3 3534	32,802 57	73,495 41	0 6281	New England Sanitary Product Company,†
	Totals . . . . .	.....	109,178	Av. \$1 116	.....	\$121,363 75	\$0 5370	Net amount of appropriation. . . . .

\* Removed beyond city limits and presumably fed to swine.

<sup>†</sup>Contract for disposal.

Total, as above. .... \$121,363 75  
Add total of direct labor & Sals (factory note \$29) 555 696 14

1960, CCC

Net amount of appropriation. . . . .

*Maintenance of Fort Hill Wharf and Dumping Boats.*

For towing by division towboats	\$14,921 72
For towing by outside towboats	2,854 50
	<hr/>
For repairs on wharves and boats	\$6,655 87
For dumping boats, stock and supplies	1,143 52
For labor, crew and dumpers	11,315 38
For allowed time, holidays	240 50
For allowed time, injuries	75 00
	<hr/>
	19,430 27
Total cost of maintenance of Fort Hill Wharf and dumping boats	<hr/> <u>\$37,206 49</u>

Number of trips to sea by towboat, Sanitary Service	380
Number of trips to sea by towboat, Sewer Service	4
Number of trips to sea by outside towboats, Sanitary Service	63
	<hr/>
Number of scows to sea	447
Cost per cart load	\$0.25
Cost per boat load	\$80.18

## STREET DEPARTMENT — SANITARY DIVISION. 331

## Contracts.

Object.	Name.	Price per Month.	Commenc.	End.
Removal of house dirt and ashes:				
East Boston.....	Charles Berman.....	\$1,041 66 $\frac{2}{3}$	July 1, 1908	July 15, 1910
East Boston.....	Simon Collins.....	1,083 00	July 15, 1910	Jan. 31, 1911
Brighton.....	John H. Carter.....	601 66 $\frac{2}{3}$	July 15, 1908	July 15, 1910
Brighton.....	James H. McCarthy.....	613 85	July 15, 1910	Jan. 31, 1911
Part of West Roxbury.....	John J. Moore.....	690 00	Jan. 31, 1910	Jan. 31, 1911
North Dorchester.....	Arthur C. Mullen.....	1,275 00	Sept. 1, 1908	Sept. 1, 1910
North Dorchester.....	Patrick J. Lyons.....	1,925 00	Sept. 1, 1910	Jan. 31, 1911
Removal of house offal:				
East Boston.....	John T. Lane.....	416 66 $\frac{2}{3}$	July 15, 1908	July 15, 1910
East Boston.....	John T. Lane.....	416 66 $\frac{2}{3}$	July 15, 1910	Jan. 31, 1911
Brighton.....	John Newbury.....	216 66 $\frac{2}{3}$	June 20, 1908	June 20, 1910
Brighton.....	John Newbury.....	275 00	June 20, 1910	Jan. 31, 1911
Part of West Roxbury.....	William H. Kennelly.....	207 50	June 15, 1908	June 15, 1910
Part of West Roxbury.....	T. W. Griffin.....	200 00	June 15, 1910	Jan. 31, 1911
Dorchester*.....	Timothy F. Bradley.....	1,666 66 $\frac{2}{3}$	April 11, 1909	Jan. 31, 1911
Lease of wharf, Atlantic avenue†.....	Middlesex Trust.....	955 33 $\frac{1}{3}$	March 1, 1908	Dec. 1, 1908
Disposal of house offal.....	New England Sanitary Product Company.....	4,366 66 $\frac{2}{3}$	Nov. 7, 1901	Jan. 1, 1912
Disposal of waste and rubbish.....	City Refuse Utilization Company.....	458 33 $\frac{1}{3}$	Nov. 9, 1901	Dec. 1, 1908
Removal of dead animals.....	N. Ward Company.....	No charge.	Nov. 9, 1901	Jan. 1, 1912
Lease of land and buildings, East Second street.....	E. M. and M. J. Mahoney.....	\$75 00	April 1, 1909	April 1, 1914
Removal of manure.....	J. A. Kelley.....	\$1 per horse per year.	Oct. 1, 1910	Jan. 31, 1912

\* Extended from January 31, 1910, to January 31, 1911.  
 † Running at will since December 1, 1908.

All contracts advertised and let to lowest bidder.

## Amounts Paid to Contractors, 1910.

DISTRICT.	ASHES.		DISTRICT.	OFFAL.	
	Name.	Per Year.		Name.	Per Year.
2. East Boston.....	Charles Berman.....	\$6,736 07	2. East Boston.....	J. T. Lane.....	\$5,000 00
2. East Boston.....	Simon Collins.....	5,992 60			
4. Brighton.....	J. H. McCarthy.....	2,754 79	4. Brighton.....	John Newbury.....	2,969 40
4. Brighton.....	J. H. Carter.....	3,375 73	5. West Roxbury.....	T. W. Griffin.....	1,267 00
5. West Roxbury.....	J. J. Moore.....	8,280 00	5. West Roxbury.....	W. H. Kennelly.....	1,141 25
6. North Dorchester.....	A. C. Mullen.....	10,120 29	6. Dorchester.....	T. F. Bradley.....	20,000 00
6. North Dorchester.....	P. J. Lyons.....	7,700 00			

## STREET DEPARTMENT — SANITARY DIVISION. 333

## Repairs and Insurance, Year Ending January 31, 1911.

OBJECT.	Contractor.	Amount Paid.	Date of Contract.
Repairing towboat.....	Atlantic Works.....	\$1,976 00	July 18, 1910
Repairing Dumpers Nos. 2, 3 and 4..	D. D. Kelly & Son.....	1,760 00	June 9, 1910
Repairing Dumper No. 4.....	D. D. Kelly & Son.....	1,225 00	Nov. 2, 1910
Repairing Dumper No. 3.....	D. D. Kelly & Son.....	315 00	Sept. 1, 1910
Installing two water-closets at the Roxbury yard. .....	J. J. McCarthy.....	125 00	Aug. 16, 1910
Insurance on auto.....	G. R. Griffin & Co.....	70 00	Jan. 25, 1911

Number of Carts, Wagons and Sleds Used by the Sanitary Section for the Collection of House Dirt and Ashes, Waste and Rubbish and Garbage During the Year Ending January 31, 1911.

Districts.	ASH CARTS.		OFFAL WAGONS.				PAPER.			Name of Contractor.	
	WOOD.		IRON.		WOOD.		CARTS.				
	Sledge.	Double.	Sledge.	Double.	Sledge.	Double.	Wagons.	Sleds.			
1. South Boston.....	18	.....	5	.....	8	.....	1	1	17		
3. Charlestown.....	14	2	13	1	12	.....	1	1	7		
5 and 7. Roxbury.....	48	4	3	.....	.....	.....	5	.....	36		
8. South End shop.....	16	.....	19	1	.....	.....	7	11	21		
8 and 9. South End and Back Bay.....	63	1	8	.....	.....	.....	7	3	5		
10. North and West Ends.....	40	.....	.....	.....	.....	.....	21	16	86		
Total number used by Sanitary Division.....	195	7	48	2	20	.....	.....	.....	.....		
IN USE BY CONTRACTORS.											
2. East Boston.....	5	.....	.....	.....	5	.....	.....	.....	.....	Simon Collins.	
2. East Boston.....	.....	.....	.....	.....	.....	5	.....	.....	.....	John T. Lane.*	
4. Brighton.....	4	5	.....	.....	.....	.....	.....	.....	.....	John H. McCarthy.*	
4. Brighton.....	.....	.....	.....	.....	1	6	1	.....	.....	John Newbury.	
5. West Roxbury.....	.....	3	.....	.....	.....	.....	4	.....	.....	John J. Moore.*	
5. West Roxbury.....	2	10	.....	.....	.....	.....	.....	.....	.....	T. F. Griffin.	
6. North Dorchester.....	.....	10	.....	.....	.....	.....	.....	.....	.....	Arthur C. Mullen. (P. J. Lyons.)	
6. South Dorchester.....	.....	.....	.....	8	2	.....	.....	.....	.....	Hired teams.*	
6. Dorchester.....	201	40	48	10	23	15	22	16	86	Timothy F. Bradley.	
Totals.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

\* Contractors furnished their own teams.

LANDS AND BUILDINGS IN CHARGE OF THE SANITARY DIVISION.

*South Boston Stable. (Leased.)*

Stables and sheds, with accommodations for twenty horses, located at H and Second streets, South Boston.

*East Boston Stable. (Leased.)*

Stables and shed, with accommodations for fifteen horses, located at 324 East Eagle street and occupied jointly by Paving, Sewer, Street Cleaning and Sanitary Divisions.

*Charlestown Stable.*

With accommodations for twenty-five horses, situated on Rutherford avenue; lot contains 17,300 square feet of land; stable built in 1875; cost \$5,083.07; sheds and outbuildings built in 1879.

*Brighton.*

Accommodation was provided by the Sewer Division at its stable on Western avenue for two horses of the Sanitary Division. Discontinued July 15, 1908.

*Highland Stable.*

With accommodations for seventy-two horses on the old almshouse lot, Highland street, containing 81,082 square feet. A part of this stable and adjoining lot is used by the Paving Division. There is on this lot a brick stable, built in 1878, which cost \$88,594.13. On this lot is an offal shed, erected in 1875, at a cost of \$1,160.12. This offal shed was abandoned on April 1, 1897, and in 1900 part of it was remodeled and is now used as a carriage house and wash room.

*South City Stables, Shops and Sheds.*

Situated on Albany street, opposite Newton street. The lot belonged to the city before being used for this purpose, and contains 90,780 square feet of land.

The stables and buildings connected therewith are of brick. There are also on the premises five wooden sheds used for storing wagons, etc. The stable is two stories high, with French roof, and has accommodations for 100 horses. Twenty-three horses are kept in sheds. Total original cost, exclusive of land, \$79,089.23. In 1899 a veterinary hospital was built and equipped for the purpose of caring for sick and disabled horses.

Connected with stables are blacksmith, wheelwright, paint and harnessmaker's shops, in which wagons, carts, harnesses, etc., used by this and other departments are constructed and kept in repair, also a horseshoeing shop for shoeing the horses of the division located in this section of the city.

*West Stables and Sheds.*

The stable is a brick building, a story and a half high, 128 feet by 50 feet, located on North Grove street; built in 1860 without buildings attached to same. It has accommodations for ninety horses in stables and sheds. The lot contains about 45,152 square feet. On May 11, 1896, a horseshoeing shop was established for the purpose of shoeing horses of the division stabled in this section of the city.

*Fort Hill Wharf.*

Containing 21,054 square feet, placed in charge of the Sanitary Division; used as a dumping station for the city's garbage and refuse and as a mooring place for dumping boats and scows, which convey this material to sea and to the plant of the New England Sanitary Product Company. Cost of constructing platform and dredging dock, \$6,219.33. There are five Barney dumping boats which are in continual use and are towed to sea by the tugboat "Cormorant."

*Litchfield's Wharf. (Leased.)*

Situated at 466 to 470 Atlantic avenue, containing about 35,460 square feet. Leased from Jacob H. Hecht, March 1, 1898, for a period of ten years. This wharf adjoins Fort Hill Wharf and is occupied in part by the New England Sanitary Product Company as a berth for their scows, and also by the buildings of the City Refuse Utilization Company for the disposal of waste and rubbish. A portion of this wharf is used by the Paving Service. This property is now owned by the Middlesex Trust. Lease extended from March 1, 1908, to December 1, 1908, and now running at will.

*Weighing Shed. (Hired.)*

Situated at the corner of Massachusetts avenue and Southampton street. Rented from the Boston Consolidated Gas Company. Lot contains about 2,300 square feet of land.

*Wharf Property on Freeport Street, Dorchester.*

On Freeport street, Dorchester, wharf property containing 160,745 square feet, bought by the city for the Sanitary Department, but never used.

## 1910.—STREET CLEANING SERVICE.

*Items of Expenditure for the Year.*

Salary of deputy and office pay rolls . . . . .	\$3,942	32
Stationery and postage . . . . .	305	10
Printing . . . . .	1,087	12
Uniforms . . . . .	2,603	35
Advertising . . . . .	4	80
Telephone service . . . . .	272	35
Automobile, purchase of . . . . .	674	43
Office items and incidentals . . . . .	11	26
Foremen . . . . .	10,914	47
Subforemen on paved streets, gutters, crossings, snow work, patrolling, etc. . . . .	19,352	41
Labor on paved streets, gutters, crossings, snow work, patrolling, etc. . . . .	175,658	35
Hired teams on paved streets, gutters, crossings, snow work, patrolling, etc. . . . .	13,864	85
Rent and labor on dumps . . . . .	13,060	27
Sand . . . . .	290	50
Repairs on snow dump . . . . .	498	33
Snow license . . . . .	500	00
Hay, straw and grain . . . . .	28,234	19
Stable and yard labor . . . . .	25,615	14
Rents . . . . .	3,460	70
Fuel . . . . .	987	15
Gas and electric lighting . . . . .	357	62
Stable and yard repairs and furnishings . . . . .	2,836	57
Cart and carriage repairs and furnishings . . . . .	5,374	80
Harness repairs . . . . .	752	23
Tool repairs . . . . .	399	10
Sweeping machine repairs . . . . .	2,546	85
Horseshoeing . . . . .	5,753	50
Veterinary services and medicine . . . . .	2,039	52
Tolls and fares . . . . .	82	60
Broom stock purchased . . . . .	1,227	42
Refilling machine brooms . . . . .	3,168	99
Tools . . . . .	299	10
Flushing machine repairs . . . . .	817	57
Road breakers and gutter plows purchased . . . . .	425	00
Horses purchased . . . . .	8,772	50
Holidays, allowed time and medical attendance . . . . .	6,880	52
Annuity (see chapter 569, Acts 1896) . . . . .	300	00
Calcium chloride work . . . . .	24	00
Total . . . . .	\$343,394	98

*Patrol System.*

Foreman . . . . .	\$1,396 20
Subforeman, labor and hired teams . . . . .	61,542 46
Cart and barrel repairs . . . . .	795 26
Push cart and barrel stock . . . . .	1,840 22
Yard and office repairs . . . . .	370 04
Yard and office labor . . . . .	2,940 83
Rent and labor on dumps . . . . .	839 43
Rents . . . . .	442 00
Fuel . . . . .	38 50
Light . . . . .	13 56
Telephone service . . . . .	59 64
Holidays, allowed time and medical attendance . . . . .	2,167 52
Harness repairs . . . . .	18 33
Horseshoeing . . . . .	137 75
Tools and tool repairs . . . . .	84 00
Brooms . . . . .	127 50
Veterinary service and medicine . . . . .	25 00
Total . . . . .	\$72,838 24

*Street Watering and Oiling Service.*

Superintendence and office salaries . . . . .	\$5,768 18
Advertising . . . . .	17 75
Printing . . . . .	490 22
Telephone . . . . .	21 43
Office items . . . . .	34 20
Bicycle and bicycle repairs . . . . .	412 31
Labor and inspection, street watering . . . . .	9,152 31
Labor and inspection, street oiling . . . . .	12,516 49
Hired teams, street watering . . . . .	45,871 04
Hired teams, street oiling . . . . .	14,949 01
Supplies and repairs, oil plants . . . . .	999 24
Street oil, soap, etc. . . . .	66,873 73
Tools . . . . .	11 72
Fuel . . . . .	621 10
Yard and stable furnishings . . . . .	24 45
Cart repairs . . . . .	523 86
Standpipes, maintenance and repairs . . . . .	2,445 74
Horseshoeing . . . . .	318 25
Holidays . . . . .	93 06
Incidentals . . . . .	40 89
Total . . . . .	\$161,184 98

*Recapitulation.*

Street cleaning . . . . .	\$343,394 98
Patrol system . . . . .	72,838 24
Watering and oiling . . . . .	161,184 98
	\$577,418 20

## STREET DEPARTMENT — SANITARY DIVISION. 339

Distribution of Force February 1, 1910, Street Cleaning Service.  
Classes of Employees.

DISTRICT,	Foremen, \$1,400 per Year.	Clerk, \$1,000 per Year.	Messenger, \$800 per Year.	Subfore- men, \$82 per Day.	Inspectors, \$2.50 per Day.	Stable Laborers, \$2.50 per Day.	Yard Laborers, \$2.25 per Day.	Machine Drivers, \$1.50 per Week.	Drivers, Broom- men, Helpers, \$2.25 per Day.	Miscel- laneous.	Total.
1.....	1	.....	.....	1	2	.....	5	2	30	.....	41
2.....	1	.....	.....	1	.....	.....	2	2	19	.....	25
3.....	1	.....	.....	1	.....	1	1	2	21	.....	27
6.....	.....	.....	.....	1	.....	.....	.....	1	8	.....	10
7.....	1	.....	.....	3	.....	.....	1	2	30	.....	37
8. Uptown.....	1	.....	.....	2	.....	.....	1	2	22	.....	28
8. Downtown.....	1	.....	.....	4	1	.....	.....	8	35	.....	49
South Stable.....	.....	.....	1	.....	.....	.....	11	.....	.....	.....	12
9.....	1	.....	.....	2	.....	.....	.....	.....	18	.....	21
10. West End.....	1	.....	.....	2	.....	.....	.....	3	23	.....	29
10. North End.....	.....	.....	.....	2	.....	.....	.....	3	22	.....	27
10. Patrol.....	.....	.....	.....	1	.....	.....	.....	3	13	.....	14
West Stable.....	.....	.....	.....	.....	1	2	5	.....	.....	.....	8
11.....	1	1	.....	4	1	.....	2	.....	74	*1	84
Totals.....	9	1	1	24	5	3	28	25	315	1	412

\* One boy at \$1.25 per day.  
Street cleaning force, including office, February 1, 1910..... 416  
Street watering force, August 1, 1909..... 41  

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**Distribution of Force February 1, 1911, Street Cleaning Service.**  
*Classes of Employees.*

District,	Foremen, \$1,400 per Year.	Clerk, \$1,000 per Year.	Messenger, \$800 per Year.	Subfore- men \$3 per Day.	Inspectors, \$2.50 per Day.	Stable Laborers, \$2.50 per Day.	Yard Laborers, \$2.25 per Day.	Machine Drivers, \$15 per Week.	Drivers, Broom- men, Helpers, \$2.25 per Day.	Miscel- lanous.	Total.
1.....	1	.	.	2	.	4	3	28	28	.....	38
2.....	1	.	.	1	1	2	2	19	19	.....	25
3.....	1	.	.	1	.	1	1	2	20	.....	26
6.....	.	.	.	1	.	.	.	1	8	.....	10
7.....	1	.	.	2	1	1	1	2	30	.....	38
8. Uptown.....	1	.	.	2	.	.	.	2	22	.....	27
8. Downtown.....	1	.	.	4	2	.	.	8	41	.....	56
South Stable.....	.	.	1	.	.	4	6	.....	.....	.....	11
9.....	1	.	.	2	.	.	.	10	10	.....	13
10. West End.....	1	.	.	3	.	.	.	2	23	.....	29
10. North End.....	.	.	.	3	.	.	.	2	21	.....	26
10. Patrol.....	.	.	.	1	1	.	.	15	15	.....	17
West Stable.....	.	.	.	.	1	2	5	.....	.....	.....	8
11.....	1	1	.	4	2	.	.	2	82	*1	93
Totals.....	9	1	1	25	8	8	19	26	319	1	417.

\* One boy at \$1.25 per day.

Street cleaning force, February 1, 1911, including office..... 421

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## STREET DEPARTMENT — SANITARY DIVISION. 341

## Miles and Area of Streets Cared for, Year 1910-11.

DISTRICT No.	Location.	MILES OF STREETS CARED FOR.		SQUARE YARDS CARED FOR.		Total Square Yards.
		Paved.	Macadam.	Paved.	Gutters 9 feet Wide.	
1.....	South Boston.....	20.19	17.82	424,000	94,090	518,090
2.....	East Boston.....	7.21	19.23	154,000	101,535	255,535
3.....	Charlestown.....	12.91	11.60	293,000	61,250	354,250
6.....	Dorchester (part).....	5.29	24.32	109,000	128,410	237,410
7.....	Roxbury.....	17.32	9.29	383,000	49,050	432,050
8.....	South End (uptown).....	11.16	12.01	225,000	63,415	288,415
8.....	South End (downtown).....	28.20	1.22	570,000	6,440	576,440
9.....	Back Bay.....	12.46	18.00	252,000	95,040	347,040
10.....	North End.....	9.35	.94	189,000	4,965	193,965
10.....	West End.....	11.48	.....	232,000	.....	232,000
<b>Totals.....</b>		<b>135.57</b>	<b>114.43</b>	<b>2,831,000</b>	<b>604,195</b>	<b>3,435,195</b>

## Summary.

	STREET CLEANING SERVICE.		STREET WATERING SERVICE.	
	1909-10.	1910-11.	1909-10.	1910-11.
Labor.....	\$293,963 98	\$314,430 35	\$27,655 68	\$24,946 23
Teaming.....	12,335 66	14,182 09	54,579 33	60,158 41
Division bills.....	45,023 10	38,550 64	4,436 33	5,222 16
Sundry bills.....	50,174 67	49,070 14	84,057 41	70,858 18
<b>Totals.....</b>	<b>\$401,497 41</b>	<b>\$416,233 22</b>	<b>\$170,728 75</b>	<b>\$161,184 98</b>

**Property Owned by the Street Cleaning and Watering Service.**

*South Boston.*—Lease of stable at No. 162 West Second street.

*East Boston.*—Part of stable on East Eagle street (leased by the Highway Division).

*Charlestown.*—Part of stable at No. 263 Rutherford avenue (in charge of Sanitary Division); office building, Rutherford avenue.

*Roxbury.*—Part of stable on Highland street (in charge of Sanitary Division). Oil plant in Sanitary Division yard on Highland street.

*South End.*—Part of stable at No. 650 Albany street (in charge of Sanitary Division).

*West Yard.*—Part of stable on North Grove street (in charge of Sanitary Division).

*Back Bay.*—Lease of land No. 62 Piedmont street; booth loaned by Election Commissioners used as office on the above land. Oil plant in Sewer Division yard on Hereford street.

*Dorchester.*—Oil plant in Sewer Division yard, Gibson street.

*Brighton.*—Oil plant in Highway Division yard, Chestnut Hill avenue.

## Contracts for the Year Ending January 31, 1911.

NATURE OF CONTRACT.	With Whom.	Amount.	Date.
Five years' lease of stable (Street Cleaning) . . . . .	R. S. Brine Transportation Company . . . . .	\$1,000 per year.	September 1, 1908.

**Contracts for Furnishing Carts for Watering and Oiling Streets, 1910.**

DISTRICT.	Contractor.	Price.	Term.	Amount Paid under Contract.
1. South Boston.....	Thomas F. Lynch.....	\$5 18	April 1 to Dec. 1, 1910	\$8,108 00
2. East Boston.....	J. P. O'Riorden.....	5 40	April 1 to Dec. 1, 1910	2,448 90
3. Charlestown.....	J. P. O'Riorden.....	5 40	April 1 to Dec. 1, 1910	4,031 10
4. Brighton.....	J. H. McCarthy.....	5 25	April 1 to Dec. 1, 1910	3,764 26
5. West Roxbury.....	M. McGuiniss & Co....	5 00	April 1 to Dec. 1, 1910	4,471 00
6-9. Dorchester.....	John H. Winsloe.....	4 94	April 1 to Dec. 1, 1910	7,988 90
7. Roxbury.....	James E. Noble.....	5 15	April 1 to Dec. 1, 1910	8,445 99
8. South End.....	Joseph E. McGreevey..	5 00	April 1 to Dec. 1, 1910	8,540 00
10. North & West Ends,	William Gilligan Co....	5 25	April 1 to Dec. 1, 1910	11,272 20

**Distribution of Horses and Rolling Stock.**

ITEMS.	DISTRICTS.				South Stable.	West Yard.	Total.
	1.	2.	3.	7.			
Cart horses.....	18	10	10	10	49	35	132
Driving horses.....	2	1	1	4	6	1	15
Carts, single.....	18	8	10	11	68	24	139
Carts, watering.....	2	1	1	1	13	2	20
Machines, single.....			1		8		9
Machines, double.....	4	2	2	4	21	7	40
Machines, road.....					4		4
Machines, flushing.....					4		4
Wagons, express.....	1	1	1		1		4
Wagons, Concord.....			1	1	4		6
Snow plows.....	1	2	1		3	1	8
Buggies.....	1	1	1	1	6	1	11

**Amount of Hay, Straw, Oats and Shorts Used by the Street Cleaning and Watering Service for the Year 1910-11.**

	Amount Used.	PRICE PAID.	
		Highest.	Lowest.
Hay . . . . .	737,264 lbs.	\$24 25	\$19 50
Straw . . . . .	80,667 "	21 50	13 50
Shorts . . . . .	15,500 "	29 00	24 00
		Per Bushel.	
Oats . . . . .	19,940 bu.	\$0 56	\$0 40½

## STREET DEPARTMENT — SANITARY DIVISION. 345

## Cost of Maintaining Horses on a Basis of 365 Days per Year.

Districts.	South Boston.	East Boston.	Charlestown.	Roxbury.	South Stable.	West Stable.	Totals.
Average Number of Horses Kept.	19.2	11.2	10.8	13.4	52.2	33.8	140.6
Items.	Total Cost per Year.	Cost per Horse per Day.	Total Cost per Year.	Cost per Horse per Day.	Total Cost per Year.	Cost per Horse per Day.	Total Cost per Year.
Labor.	\$4,167 25	\$0 594	\$2,545 62	\$0 623	\$2,237 64	\$0 567	\$1,223 65
Hay and grain.	3,170 80	452	2,156 22	527	2,458 04	623	3,053 70
Fuel, light and rent.	1,323 03	190	1,855 02	454	146 89	037	139 80
Shoeing.	609 50	087	447 75	109	464 00	118	471 25
Stable repairs.	126 08	018	12 93	003	56 18	015	*544 01
Veterinary services and medicine.	199 77	028	121 66	029	123 53	031	142 61
Furnishings and repairs.	293 37	029	130 37	032	139 44	035	181 82
Totals.	\$9,809 83	\$1 399	\$7,272 07	\$1 777	\$5,625 72	\$1 426	\$5,756 84
					\$1 176	\$23,318 46	\$1 223
						\$14,766 73	\$1 197
						\$67,163 15	\$1 308

\* New addition to stable, \$485.85.

## Flushing.

Cost of Supervision.	Cost of Labor and Teams.	Cost of Repairs and Tools.	Total Cost.*	Square Yards Cared for.	Square Yards Flushed Once.	Total Gallons of Water Used.	Gallons of Water Used per Square Yard.	Cost per Thousand Square Yards Flushed Once.
\$553 75	\$4,112 13	\$817 57	\$5,483 45	398,228	15,029,567	3,026,400	0.132	\$0 365

\* Not including cost of water.

**Snow Work for all Districts.***Crossings and Gutter Work and Snow Removal.*

Inspection and Labor, Crossings and Gutters.	Inspection and Teaming, Snow Removal.	Loads of Snow Removed.	Cubic Yards of Snow Removed.	Cost per Load Removed.	Cost per Cubic Yard Removed.
\$5,101 79	* \$23,770 02	† 21,783	53,989	\$1 091	\$0 44

\* Time and one-half allowed for Sundays and holidays.

† 4,467 loads removed by Sanitary Service teams.

**Push Cart Patrol, by Districts.**

DISTRICT.	Inspection, Labor and Teams.	Barrel Loads Removed.	Cubic Yards Removed.	Cost per Cubic Yard.	Cost per Barrel.
1 .....	\$2,120 81	5,849	758	\$2 80	\$0 362
2 .....	956 25	2,484	322	2 97	385
3 .....	1,788 76	3,475	450	3 97	515
7 .....	5,486 83	16,221	2,103	2 61	338
10. Patrol system .....	7,300 46	12,252	1,588	4 59	596
11.....	52,099 61	116,238	15,068	3 46	448
Totals.....	\$69,752 72	156,519	20,289		
Average.....	.....	.....	.....	\$3 40	\$0 441

Capacity of barrels . . . . .  $3\frac{1}{2}$  cubic feet

Waste barrels emptied . . . . . 13,298

Subway barrels emptied . . . . . 289

Total barrels . . . . . 13,587

Rubbish boxes emptied . . . . . 24,439

**Summary of Volume and Cost of Snow Removed, Year Ending January 31, 1911.**

DISTRICTS.	LOADS.		TOTAL LOADS.		Cubic Yards, Single (Street Cleaning Section.) *	Total Cubic Yards, Single (Sanitary Section) †	Cost, Total Cost.	Cost per Cubic Yard, ‡	Total Cost per Cubic Yard.
	Single (Street Cleaning Section.) *	Single (Sanitary Section.) †	Single (Street Cleaning Section.) *	Single (Sanitary Section) †					
1 South Boston.....	1,372	.....	.....	.....	3,046	.....	\$1,600 41	.....	\$0 52
2 East Boston.....	1,878	.....	.....	.....	4,169	.....	318 78	.....	07
3 Charlestown.....	1,051	.....	.....	.....	2,333	.....	773 68	.....	33
6 Dorchester.....	207	.....	.....	.....	460	.....	301 88	.....	66
7 Roxbury.....	473	.....	.....	.....	1,050	.....	925 75	.....	88
8 South End.....	4,754	.....	.....	.....	10,554	.....	7,016 15	.....	66
9 Back Bay.....	1,000	.....	.....	.....	2,220	.....	936 13	.....	42
10 North and West Ends.....	3,901	2,119	.....	.....	14,148	.....	7,147 96	.....	51
11 Patrol.....	2,680	2,348	.....	.....	12,031	.....	4,049 28	.....	39
Totals.....	.....	.....	17,316	4,467	.....	50,011	.....	\$23,770 02	.....
									\$0 475

\* Street Cleaning Section, loads of 2.22 cubic yards.

† Sanitary Section, loads of 2.59 cubic yards.  
‡ Includes Sunday and other work paid for at time and one-half.



## Machine Sweeping of Paved Streets and Gutters.

DISTRICT.	PAVED STREETS.		GUTTERS.		PAVED STREETS AND GUTTERS.		LOADS OF DIRT REMOVED.		CUBIC YARDS OF DIRT REMOVED.				
	Miles Cleaned Once.	Thousand Square Yards Cleaned Once.	Miles Cleaned Once.	Thousand Square Yards Cleaned Once.	Total Cost.	Cost per Mile Cleaned Once.	Cost per Thousand Square Yards Cleaned Once.	Total.	Per Thousand Square Yards.	Total.	Per Thousand Square Yards.		
1.....	1,944.76	40,884	1,279.73	6,757	47,641	\$17,955 18	\$5 57	\$0 377	7,068	.15	14,136	.30	\$1,269
2.....	610.04	12,994	888.45	4,691	17,685	11,288 19	7 53	637	6,962	.39	13,924	.78	811
3.....	1,104.67	25,076	379.73	2,005	27,081	13,106 37	8 83	484	7,381	.27	14,762	.54	888
6.....	212.57	4,279	470.83	2,486	6,765	5,529 50	8 09	817	2,237	.33	4,474	.66	1,236
7.....	1,145.75	25,321	425.38	2,246	27,567	15,030 27	9 57	545	7,902	.29	15,804	.57	951
8. Uptown.....	1,631.18	32,950	646.40	3,413	36,363	14,621 02	6 42	402	6,481	.18	12,962	.36	1,128
8. Downtown.....	5,457.42	110,240	80.49	425	110,665	36,757 49	6 63	332	15,369	.14	30,738	.28	1,195
9.....	1,050.19	21,214	643.74	3,399	24,613	8,678 17	5 12	353	3,878	.15	7,756	.32	1,119
10. West End.....	1,890.00	38,178	116.67	616	38,794	18,346 84	9 14	472	6,836	.18	13,672	.35	1,229
10. North End.....	1,720.84	34,761	23.48	124	34,885	16,710 65	9 58	479	7,200	.21	14,400	.41	1,124
Totals.....	16,767.42	345,897	4,954.90	26,162	372,059	\$158,023 68	.....	.....	71,314	.....	142,028	.....	.....
Averages.....	.....	.....	.....	.....	.....	.....	.....	.....	23	.....	46	.....	\$1,095

## Street Oiling, Showing Cost of Labor, Teaming, Oil, etc., Including Superintendent, 1910.

DISTRICT.	Total Area Oiled. Equivalent Mileage, 30-foot Roadway.	Area Covered in Square Yards. Yards².	DATES OF OILING.		Number of Times Treated.	Total Cost.	Cost per Square Yard.		Emulsion Used (Gallons).	Emulsion Used per Sq. Oiled Area.	Total Water Used (Gallons).	
			First.	Last.			Covered Office.	Entire Season.				
1. South Boston.....	538,162	30,577	4,198,021	March 14	Nov. 17	7,800	\$8,764 85	\$0 00209	\$0 01628	137,447	.2554	411,750
2. East Boston.....	411,826	23,399	3,610,846	March 24	Nov. 19	8,767	6,216 90	00171	01509	93,069	.2259	283,275
3. Charlestown.....	163,481	9,288	1,351,603	March 25	Oct. 6	8,267	3,279 06	00242	02005	38,549	.2358	124,200
4. Brighton.....	690,269	39,219	3,756,842	March 31	Nov. 18	5,442	10,348 59	00275	01499	183,867	.2663	574,200
5. West Roxbury.....	1,003,840	57,036	4,692,169	March 29	Nov. 1	4,674	14,185 00	00302	01413	215,014	.2141	608,175
6-9. Dorchester.....	1,468,213	83,421	10,339,004	March 22	Nov. 18	7,041	21,513 79	00208	01465	380,806	.2593	1,174,950
7. Roxbury.....	874,383	49,680	6,984,012	March 16	Nov. 17	7,987	15,337 71	00219	01754	267,050	.3054	909,000
8-10. South End, Back Bay and part of Roxbury..	695,004	39,488	8,564,832	March 10	Nov. 21	12,323	13,777 43	00160	01982	249,500	.3589	805,950
Totals.....	5,845,178	332,108	43,497,329	.....	.....	62,301	\$83,423 33	\$0 01756	\$0 13255	1,565,302	2,1211	4,891,500
Averages.....	.....	.....	.....	.....	.....	7,788	.....	\$0 00223	\$0 01656	.....	.2651	.....

## Street Oiling, Terra Colia, 1910.

DISTRICT.	Area Covered Once (Square Yards).	Gallons Used.	Total Cost.	Cost Per Square Yard, One Treatment.	Estimated Cost, Six Treatments.
West Roxbury.....					
Dorchester.....					
Roxbury.....	1,630,737	35,592	*\$5,766 11	\$0 00353	\$0 02118

\* Six hundred eighty-eight dollars not included in above table was for oil wasted by defective car and not used.

REMARKS.—No terra colia was used after August 17, 1910. At the beginning of the season about 475,000 square yards were treated once; only 233,151 square yards of this area were treated regularly to August 17, with an average number of 4.188 treatments. The streets not treated regularly with terra colia were subsequently treated with other dust preventives.

## Dry Calcium Chloride.

During the month of January, 1911, when the temperature was below 32 degrees (freezing), and the streets somewhat dry and dusty, calcium chloride was used as a dust preventive. It proved to be satisfactory but the cost was somewhat high. About 51,266 square yards in District 8-10 were treated, at a cost of \$0.0036 per square yard for one treatment. In applying it to the street two parts calcium chloride and one part sand were used, said mixture being distributed by a spreading machine.

## STREET WATERING, 1910.

## Days Out, Cart-days Worked, Number of Carts Out and Cost of Teaming and Labor, by Months.

MONTH.	Days Out.	Cart-days Worked.	Average Cart-days Worked.	Cost of Teaming.	Average Cost per Cart.	Cost of Labor.	Total Cost, Labor and Teaming.	Average Cost per Cart, Labor and Teaming.	Number of Carts Out.	Average Carts Out.
1910.										
March.....	12	677.0	56	\$3,507.62	\$61.54	\$173.17	\$3,680.79	\$64.57	684	57
April.....	16	1,031.5	66	5,297.76	77.90	938.43	6,236.19	91.70	1,081	68
May.....	23	983.5	43	5,007.75	98.19	861.71	5,869.46	115.09	1,167	51
June.....	20	989.0	50	5,139.95	95.19	858.16	5,998.11	111.08	1,072	54
July.....	30	1,699.75	57	8,784.62	144.01	1,160.89	9,945.51	163.04	1,819	61
August.....	28	1,530.375	55	7,916.47	131.94	981.70	8,898.17	148.30	1,650	60
September.....	23	945.25	41	4,802.27	108.71	988.78	5,881.05	130.69	1,038	45
October.....	23	736.2	32	3,862.12	110.34	1,187.02	5,049.14	144.26	803	35
November.....	15	274.0	18	1,434.95	75.52	834.89	2,269.84	119.46	285	19
December.....	1	0.5	.....	.....	.....	.....	.....	.....	1	
Totals.....	191	8,867.075	418	\$45,843.51	\$903.34	\$7,984.75	\$53,828.26	\$1,088.19	9,600	450
Less December.....	190	8,866.575	.....	.....	.....	.....	.....	.....	9,599	
Averages, March to November, inclusive.....	21.11	985.17	46.44	.....	.....	\$100.37	.....	.....	\$120.91	1,066.66
										50

Note.—Cost of teaming, December, 1909, also labor and teaming for December, 1910, and January, 1911, not included in table. Total amount, \$192.63.

**AREA WATERED, 1910.**  
**Total Cost per Square Yard and Amount of Water Used.**

DISTRICT.	Total Square Yards Watered.	Equivalent Mileage, 30-foot Roadway.	DATES OF WATERING.		Number of Days One Cart or Out.	Total Cost.	Cost Per Square Yard.	Cart- days Worked.	Loads Spread During Season.	Square Yards Covered Once During Season.	Total Gallons of Water Used.
			First.	Last.							
1. South Boston.....	463,902	26,355	Mar. 17	Nov. 27	192	\$8,788 19	\$0 01894	1,351	20,265	85,113,000	12,155,000
2. East Boston.....	130,793	7,431	Mar. 19	Nov. 19	170	3,393 69	02394	392	5,880	24,696,000	3,528,000
3. Charlestown.....	245,649	13,957	Mar. 22	Nov. 22	179	4,775 85	01944	671	10,065	42,273,000	6,039,000
4. Brighton.....	* 164,877	9,368	Mar. 20	Dec. 4	175	3,770 69	02286	458	6,870	28,854,000	4,122,000
5. West Roxbury.....	* 156,303	8,880	Mar. 19	Nov. 27	185	3,983 92	02548	459	6,885	28,917,000	4,131,000
6-9. Dorchester.....	* 302,221	17,171	Mar. 19	Nov. 27	188	6,527 11	02159	912	13,680	57,456,000	8,208,000
7. Roxbury.....	220,734	12,541	Mar. 15	Nov. 27	200	7,571 23	03430	1,168	17,520	73,584,000	10,512,000
8. South End and part of Roxbury.....	414,025	23,524	Mar. 20	Nov. 27	200	10,261 76	02478	1,521	22,815	95,823,000	13,689,000
10. City proper.....	553,404	31,443	Mar. 20	Nov. 27	208	12,235 10	02210	1,937	29,055	122,031,000	17,433,000
Totals.....	2,651,908	150,673	.....	.....	.....	\$61,307 54	\$0 21543	8,869	133,035	558,747,000	79,824,000
Average.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

\* Approximate, not treated regularly.

Note.—A watering cart distributes on an average of 15 loads per day on an area of 4,200 square yards to the load.

APPENDIX E.

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REPORT OF THE CHIEF ENGINEER OF THE  
SEWER DIVISION.

BOSTON, January 31, 1911.

MR. L. K. ROURKE,

*Superintendent of Streets:*

DEAR SIR,— In the following communication I will make mention of the *most important items of work only*, done by the Sewer Division of the Street Department during the year 1910, and will also mention under the head of each district the more important work which it is contemplated to do the coming year:

## CITY PROPER.

The beginning of the conversion of the existing system in the Back Bay to the separate system is marked by the building of a sewer in *Dartmouth street*, between Beacon and Boylston streets, which is the sanitary main for the Dartmouth, Clarendon, Berkeley and Church streets district.

In *Stuart street extension* and *Arlington street extension* sewers and surface drains have been built by the Park Square Trust and released to the city. This is the beginning of the development of the Providence Station site.

The old wooden sewer in *North Market street* has been replaced by one of concrete. Owing to the crowded condition of the street this work was done by the "cut and cover" method, with very little inconvenience to abutters or to travel.

*Contemplated.*

The sewer now building in *Dartmouth street* should be extended across Huntington avenue through St. James street and the extension thereof and Providence street to connect with the system already built in Park square

and awaiting an outlet. It will also have to be extended in Berkeley street to Columbus avenue and through Blagden and Exeter streets to improve the drainage conditions in the vicinity of the Boston Athletic Association and the Hotel Lenox.

The *Back Bay outlets* in Church, Berkeley, Dartmouth, Fairfield and Hereford streets, between Beacon and Back streets, should be rebuilt and enlarged to a size to correspond with the connections built from the marginal conduit to Back street by the Charles River Basin Commission.

The *district regulator on the west side intercepting sewer* should be removed from Cambridge street to a point above Fruit street, and individual regulators built on the Cambridge and Fruit street sewers to diminish the amount of polluted overflow into the Charles River Basin.

#### ROXBURY.

Surface drains have been built in *Brookline avenue* and the *Fenway* up to *Worthington street*, and in *Vila street* and *Longwood avenue*. A complete separate system of sewers has been built in *Tremont street*, between *Whittier* and *Cunard streets*, and in *Windsor street*, *Shawmut avenue*, *Madison street*, *Ball*, *Greenwich*, *Cabot*, *Davenport* and *Haskins streets*.

#### Contemplated.

The separation of the system should be continued in *Vernon street* and *Washington street*, between *Williams* and *Dudley streets*, and in the short streets between *Tremont street* and *Columbus avenue* as far north as *Cunard street*, and in *Huntington avenue* from the *Brookline line* to *Wait street*.

#### DORCHESTER.

A separate system of sewers has been built in *Kilton street*, between *Harvard* and *Faxon streets*, and in *Faxon street*, between *Kilton* and *Washington streets*; also in *Geneva avenue*, between *Bowdoin street* and *Blue Hill avenue*.

The separation of the system in *Talbot avenue* has been completed by the building of a deep sanitary sewer between *Helen street* and *Blue Hill avenue*, low enough to drain all the existing buildings.

A surface water conduit for a branch of *Tenean creek* has been built in private land, between Westville and Speedwell streets.

The *Kimball street overflow*, a relief outlet for the district and for the Dorchester intercepting sewer, has been extended 268 feet.

*Contemplated.*

Two large items of work for 1911 are the improvement of *Davenport brook*, between Adams and Magdala streets, and of *Mattapan brook*, between the New York, New Haven & Hartford Railroad and West Selden street,—in both cases by the building of a large covered concrete conduit.

A similar but smaller project is the building of a concrete surface drain for the Coleman street branch of Freeport street brook.

Separate systems of sewers should be built in *Washington street*, between Harvard and Park streets, in *Blue Hill avenue*, between Canterbury and Glenway streets, and a system of sanitary sewers in the *Rugby district*.

WEST ROXBURY.

*Stony brook conduit*, sections 6 and 7, was built from a point 140 feet south of Lotus place nearly to Morton street; the *Roslindale brook conduit* from Aldrich street to Anawan avenue; *Hewlett street brook conduit*, from Farquhar street to Montclair avenue; the *Canterbury branch* of Stony brook was improved from Asylum road to Harvard street by excavating an open channel and building large concrete culverts at street crossings. A separate system of sewers was built in *Hyde Park avenue*, from Hadwin way to the Hyde Park line.

*Contemplated.*

The completion of section 7 of *Stony brook* to a point in Hyde Park avenue, 75 feet south of Tower street; section 8 of *Stony brook conduit*, extending from the point last mentioned through Hyde Park avenue to Walk Hill street, thence across private land and the New York, New Haven & Hartford Railroad and Washington street to a junction with the open channel, 300 feet west of the New York, New Haven & Hartford Railroad Bridge;

*Temple street brook conduit from Hillcrest street to the Metropolitan sewer; Auburn street brook conduit in Fresno, Auburn and Alder streets, between Roslindale brook and Washington street; surface drain in Gilman and Sutton streets; separate system of sewerage in Spring street, between Charles river and Baker street.*

#### BRIGHTON.

A long concrete surface drain was built in *Market street and Chestnut Hill avenue*, between Henshaw street and Wallingford road; a pipe surface drain in *Wallingford road*, between Chestnut Hill and Commonwealth avenues.

#### *Contemplated.*

A large concrete surface drain conduit for the *easterly branch of Shepard brook*, between the old tidal creek and North Harvard street. This will be the surface water outlet for a large portion of the Brighton territory.

*Telford street surface drain outlet in Charles river reservation and Telford street, between the Charles river and Western avenue,— a large concrete conduit.*

*Commonwealth avenue culvert under Boston & Albany Railroad about 600 feet west of Essex street.*

*Salt creek conduit under Boston & Albany Railroad at Salt creek.*

Separate system of sewers in *Hunnewell avenue and Burton street*, between Atkins street and the Newton line; also in *Market street*, between Western avenue and Boston & Albany Railroad, and in *Waverly street*, between Western avenue and Lincoln street.

#### EAST BOSTON.

The *Porter street outlet* was completed up to Cottage street; house sewers and surface drains built in *Addison street*, between Pope and Saratoga streets.

#### *Contemplated.*

A separate system of sewers in *Orient avenue*, between Farrington avenue and Tower street; separate system of sewers in *Geneva street*, between Gove and Maverick streets, and outlet to Cottage street; also in *Ashley street*, between Boardman street and the existing sewer.

## SOUTH BOSTON.

The largest item of work done in South Boston was the extension of the Kemp street overflow, a distance of 93 feet.

*Contemplated.*

Further extension of the *Kemp street outlet* to deep water; also the *Vale street outlet*; the beginning of the sewers for the drainage of the *fish pier on Commonwealth flats*; the shifting of the *district regulator* on the South Boston intercepting sewer from its present position at Mt. Washington avenue and Kemp street to the corner of Vale and Ninth streets.

Respectfully,

E. S. DORR,  
*Chief Engineer Sewer Service.*

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The work of the division is carried under chapter 3, City Ordinances, 1908, and chapter 47, Revised Ordinances, 1898, and the following statutes:

Chapter 426 — 1897, as amended by 450 — 1899 and 268 — 1903.

Chapter 383 — 1903, as amended by 464 — 1907.

Chapter 485 — 1907.

Chapter 550 — 1907.

Chapter 204 — 1908.

Chapter 514 — 1908.

## THE DUTIES OF THE SEWER DIVISION.

1. Preparation of plans for sewerage works.
2. Construction and maintenance of all drainage works.
3. Investigation of complaints in regard to defective drainage.
4. The granting of permits for sewer construction.
5. The preparation of plans for the assessment of the cost of sewer construction.
6. The examination of the plans of other corporations proposing to construct works in public streets with reference to their probable interference with sewerage works.

Total number of employees on pay roll February 1, 1910 . . . . .	621
Total number of employees on pay roll February 1, 1911 . . . . .	637
Total amount of weekly pay roll February 1, 1910, *	\$10,181 35
Total amount of weekly pay roll February 1, 1911,	10,670 18
Total amount of monthly pay roll February 1, 1910 . . . . .	617 00
Total amount of monthly pay roll February 1, 1911 . . . . .	* 617 00
Average weekly pay roll, including monthly roll, for fiscal year amounted to . . . . .	10,561 24

Charged as follows:

Maintenance . . . . .	† \$3,773 99
Sewerage works . . . . .	1,926 93
Separate systems of drainage . . . . .	4,860 32
Average number of men employed . . . . .	635
Average number of horses maintained by the division during the year . . . . .	50
The rate of wages per day to common laborers . . . . .	\$2 25

* Of this amount there was charged on account of snow to the Sanitary and Street Cleaning Division.....	\$2,400 78
Highway Division.....	341 71
	<u>\$2,742 49</u>
Includes sum charged to Street Cleaning Division.....	\$26 57
And abolition of grade crossings.....	1,353 14
	<u>\$1,379 71</u>

## Financial Statement from February 1, 1910, to January 31, 1911.

OBJECT.	Balances on Hand Feb. 1, 1910.	Appropriations, Loans and Transfers.	Revenue Received During the Year.	Total Credits.	Expenditures During the Year.	Balances on Hand Jan. 31, 1911.
Sewer Division.....	.....	\$310,000 00	\$3,916 10	\$313,916 10	\$312,541 05	*\$1,375 05
Sewerage Works.....	\$27,130 04	300,000 00	.....	327,130 04	220,966 39	106,163 65
Separate systems of drainage.....	313,461 14	674,000 60	.....	987,461 14	742,142 79	245,318 35
Totals.....	\$340,591 18	\$1,284,000 00	\$3,916 10	\$1,628,507 28	\$1,275,650 23	\$352,857 05

\* Balance to City Treasurer.

MAINTENANCE EXPENDITURES, FEBRUARY 1, 1910, TO  
JANUARY 31, 1911.

SEWER DIVISION.	
<i>Improved Sewerage.</i>	
Pumping station, inside . . . . .	\$55,019 44
Pumping station, outside . . . . .	21,204 25
Pumping station, engines . . . . .	22,535 11
Pumping station, boilers . . . . .	16,429 24
	<hr/>
Moon Island . . . . .	\$115,188 04
Main and intercepting sewers . . . . .	13,700 95
Office salaries . . . . .	20,825 64
	<hr/>
	3,000 00
	<hr/>
	\$152,714 63
<i>Stony Brook.</i>	
Maintenance . . . . .	2,412 63
<i>Miscellaneous Maintenance Charges.</i>	
Cleaning catch-basins . . . . .	35,347 58
Yard and lockers . . . . .	2,477 84
Employed at yards . . . . .	20,676 65
Horses, carts, harnesses, etc. . . . .	\$21,702 11
Teaming . . . . .	16,632 51
	<hr/>
Less amount earned by division teams . . . . .	\$38,334 62
	<hr/>
	24,013 50
Automobiles . . . . .	14,321 12
Cleaning sewers . . . . .	4,227 42
Office salaries . . . . .	23,785 16
Office expenses . . . . .	12,439 29
Culverts, repairing and maintaining . . . . .	3,171 27
Repairing department buildings . . . . .	\$1,468 77
Repairing catch basins, South Boston . . . . .	685 94
Repairing catch basins, East Boston . . . . .	1,109 83
Repairing catch basins, Charlestown . . . . .	529 16
Repairing catch basins, Brighton . . . . .	58 09
Repairing catch basins, West Roxbury . . . . .	434 77
Repairing catch basins, Dorchester . . . . .	1,054 30
Repairing catch basins, Roxbury . . . . .	986 88
Repairing catch basins, city proper . . . . .	1,703 59
Repairing sewers, South Boston . . . . .	1,668 13
Repairing sewers, East Boston . . . . .	701 32
Repairing sewers, Charlestown . . . . .	487 77
Repairing sewers, Brighton . . . . .	79 22
Repairing sewers, West Roxbury . . . . .	2,033 01
Repairing sewers, Dorchester . . . . .	1,731 69
Repairing sewers, Roxbury . . . . .	1,606 48
Repairing sewers, city proper . . . . .	1,170 83
	<hr/>
Repairing sewers, city proper . . . . .	2,777 31
	<hr/>
Fuel and oil . . . . .	20,287 09
Hardware, tools, etc. . . . .	1,554 62
Engines and boilers . . . . .	5,903 27
Sundries and miscellaneous charges . . . . .	334 07
	<hr/>
	5,133 53
<i>Carried forward</i> . . . . .	\$304,786 17

<i>Brought forward</i>		\$304,786 17
Damages, claims and medical attendance		1,502 19
Telephones		1,636 25
House connections		6,116 10
Rubber goods		2,121 12
Gatehouse, Fenway		304 28
Stock		22,304 95
Boston Elevated Railway Company		771 51
		<hr/>
		\$339,542 57

*Credit.*

Amount earned by division engines	\$2,323 00
Stock transferred and used on construction	20,831 52
Rubber goods transferred and used on construction	1,159 00
Fuel and oil transferred and used on construction	569 00
Hardware, tools, etc., transferred and used on construction	2,119 00
	<hr/>
	27,001 52
	<hr/>
	\$312,541 05

*Amount Collected by City Collector and Credited to Appropriation for Sewer Division Maintenance, February 1, 1910, to January 31, 1911.*

Boston Water Department	\$111 67
Transit Commission	153 50
Park Department	5 34
Boston Elevated Railway Company	676 08
Boston Safe Deposit and Trust Company	125 67
Penal Institutions Department	27 89
Street Cleaning Division	1,813 85
Highway Division	53 32
Sanitary Division	450 01
New York, New Haven & Hartford Railroad	30 80
John Hancock Insurance Company	125 66
Edison Electric Illuminating Company	109 88
New England Telephone and Telegraph Company	22 19
Abolishment of grade crossings	210 24
	<hr/>
	\$3,916 10

Appropriation for 1910-11	\$310,000 00
Collections for 1910-11	3,916 10

Balance to City Treasurer	\$313,916 10
	1,375 05

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\$312,541 05

**Sewer Division.— Maintenance Expenditure, Detail, 1910-11.**

ACCOUNTS.	Total Expenditure.	Labor.	Contracts.	Teaming.	Insurance.	Waste.	Coal.	Oil and Gasoline.	Packing.	Valves.	Car Fares.	Stable.	Pipe Fittings and Miscel- laneous.	Towing.
Pumping station, inside.....	\$55,019 44	\$22,162 73	\$1,440 00	.....	\$418 81	\$314 00	\$26,013 34	\$36 70	.....	\$632 21	.....	.....	\$4,001 65	.....
"    "    outside.....	21,204 25	12,128 31	3,038 00	\$2 21	.....	.....	.....	.....	.....	.....	\$81 85	\$1,498 70	1,913 21	\$2,541 97
"    "    engines.....	22,535 11	17,937 31	1,013 76	.....	.....	.....	.....	1,273 35	\$784 83	918 94	.....	.....	606 92	.....
"    "    boilers.....	16,429 24	14,976 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,453 24	.....
Moon Island.....	13,700 95	9,821 33	1,134 00	.....	140 36	10 25	288 03	22 54	.....	.....	555 60	459 80	1,269 04	.....
Office salaries, superintendent .....	3,000 00	3,000 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Main and intercepting sewers..	21,095 64	14,159 45	2,279 92	52 88	199 54	17 00	96 50	171 08	.....	.....	24 78	1,154 39	2,940 10	.....
	\$152,984 63	\$94,185 13	\$8,905 68	\$55 09	\$758 71	\$341 25	\$26,397 87	\$1,503 67	\$784 83	\$1,551 15	\$662 23	\$3,112 89	\$12,184 16	\$2,541 97
<i>Credit.</i>														
Main and intercepting sewers:														
Amount earned by depart- ment teams.....	270 00	202 50	.....	.....	.....	.....	.....	.....	.....	.....	67 50	.....	.....	.....
	\$152,714 63	\$93,982 63	\$8,905 68	\$55 09	\$758 71	\$341 25	\$26,397 87	\$1,503 67	\$784 83	\$1,551 15	\$662 23	\$3,045 39	\$12,184 16	\$2,541 97





STREET DEPARTMENT — SEWER DIVISION. 361

**Sewer Division.—Maintenance Expenditure, Detail, 1910-11.**

ACCOUNTS.	Total Expend- iture.	Labor.	Teaming.	Stock.	Contracts.	Miscellaneous.
Automobiles (4) . . . . .	\$4,227 42	\$564 00	.....	.....	.....	Insurance . . . . . \$232 75 Share new automobile . . . . . 660 27 Repairs, supplies, storage, gasoline, etc. . . . . 2,770 40 \$3,663 42
Cleaning catch-basins . . . . .	35,347 58	8,099 74	\$670 88	.....	\$26,402 08	Car fares . . . . . \$109 74 Rules . . . . . 12 00 Advertising . . . . . 470 Blacksmithing . . . . . 1 50 Salt . . . . . 42 94 \$174 88
Cleaning sewers . . . . .	23,785 16	9,572 65	3,664 88	.....	8,935 82	Car fares . . . . . \$21 50 Advertising . . . . . 33 50 Dumping . . . . . 103 00 Pump . . . . . 12 00 Rods . . . . . 200 00 Rubber goods, etc. . . . . 102 31 Machine cleaning: Machines . . . . . 584 50 Labor . . . . . 555 00 \$1,611 81
Culverts, repairing and maintaining . . . . .	1,468 77	1,268 52	200 25	.....	.....	Waste . . . . . \$22 83 Repairs, inspection, etc. . . . . 178 24 \$201 07
Engines and boilers . . . . .	1,334 07	133 00	.....	.....	.....	Coal . . . . . \$1,134 30 Oil . . . . . 420 32 1,554 62
Employed at yards . . . . .	20,676 65	20,676 65	.....	.....	.....	20 doz. picks . . . . . \$814 20 25 " pick handles . . . . . 71 " shovels. } Hose . . . . . 1,547 70 Canvas . . . . . 438 00 Waste . . . . . 26 87
Fuel and oil . . . . .	1,554 62	.....	.....	.....	.....	Hardware and tools . . . . . 3,076 50 Hardware, repairs, etc. . . . . 5,903 27
Hardware and tools . . . . .	5,903 27	.....	.....	.....	.....	3,903 27

Sewer Division.—Maintenance Expenditure, Detail, 1910-11.—Continued.

STREET DEPARTMENT — SEWER DIVISION. 363

## Recapitulation.— Maintenance Detail, 1910-11.

	Improved Sewerage.	Outside Improved Sewerage.	Totals.
Labor.....	\$94,185 13	\$101,283 42	\$195,468 55
Contracts.....	8,905 68	35,337 90	44,243 58
Teaming, hired and city.....	55 09	7,809 72	7,864 81
Insurance.....	758 71	.....	758 71
Waste.....	* 341 25	49 70	390 95
Fuel.....	* 26,397 87	1,158 80	27,556 67
Oil.....	* 1,503 67	431 64	1,935 31
Packing.....	* 784 83	.....	784 83
Valves.....	1,551 15	.....	1,551 15
Car fares and traveling expenses.....	662 23	848 75	1,510 98
Horses, etc.....	3,112 89	13,212 29	16,325 18
Towing.....	* 2,541 97	.....	2,541 97
Pipe fittings and miscellaneous.....	12,184 16	.....	12,184 16
Rent.....	.....	1,402 63	1,402 63
Telephones.....	.....	1,636 25	1,636 25
Automobiles, repairs, supplies and insurance.....	.....	3,663 42	3,663 42
Stock and miscellaneous supplies.....	.....	44,006 92	44,006 92
<b>CREDITS.</b>			
<i>Improved Sewerage.</i>			
Labor.....	\$202 50		
Stables.....	67 50		
	270 00		
<i>Outside Improved Sewerage.</i>			
Labor.....	\$18,010 12		
Miscellaneous.....	33,004 90		
		51,015 02	51,285 02
		\$152,714 63	\$159,826 42
			\$312,541 05
 * WASTE.			
3,150 pounds at 9c. and 10c.....	\$315 25	964 pounds packing at 40c. to \$2,	\$784 83
325 pounds at 8c.....	26 00		
	<u>\$341 25</u>		
 * TOWING.			
Boston Tow Boat Company.....	\$1,944 00	1,800 gallons engine at.....	\$0 24
Eastern Dredging Company.....	450 00	796 gallons cylinder at.....	32
Sanitary Division.....	147 97	207 gallons sperm at.....	88 and 90
	<u>\$2,541 97</u>	33 gallons lard at.....	1 08
		3,360 pounds grease at.....	12
			<u>\$1,503 67</u>
 * COAL.			
7,119 tons, 1,009 pounds soft....	\$26,013 34		
93 tons, 390 pounds hard....	377 03		
1 cord wood.....	7 50		
	<u>\$26,397 87</u>		

## Coal at Pumping Station.

DATE.	Contractor.	Tons.	PAID IN 1910-11.	
			Per Ton.	Totals.
Feb. 4..	Batchelder Brothers.....	1	\$4 00	\$4 00
March 16..	Bader Coal Company (lighter "P. N. Co. No. 9").....	110.709	3 27	
	(Teams).....	17.924	3 27	3,756 44
	(Barge "Harrisburg").....	1,072 <sup>1368</sup> <sub>2240</sub> Less penalty 16c.	3 27	
May 5..	Darrow, Mann Company (barge "Grace").....	1,521 <sup>607</sup> <sub>2240</sub>	3 76	5,719 81
June 3..	Batchelder Brothers.....	1	4 00	4 00
July 18..	Darrow, Mann Company (barge "Edith").....	1,497 <sup>418</sup> <sub>2240</sub>	3 76	5,629 41
Aug. 29..	Batchelder Brothers.....	1	4 00	4 00
Dec. 16..	Darrow, Mann Company (barge "Dora").....	1,426 <sup>1847</sup> <sub>2240</sub>	3 76	5,364 86
Jan. 7..	Darrow, Mann Company (barge "Grace").....	1,470 <sup>2156</sup> <sub>2240</sub>	3 76	5,530 82
	Totals.....	7,120 <sup>988</sup> <sub>2240</sub>	.....	\$26,013 34

Catch-basins Cleaned by Contract, 1910-11.

Total basins cleaned	27,491.9	cubic yards
Total excavation	3.52	cubic yards
Average cost per basin	\$4.16	
Average cost per cubic yard	\$1.18	

Total cost: Contractors.....	* \$26,767.21
Inspection.....	† \$5,644.59
Advertising.....	8.70
Miscellaneous.....	13.50
	_____

\* \$2,308.69 paid in 1911.

+ \$563.50 paid in 1911.

† \$122.01 car fares, etc.

## Sewerage Works.

Expenditures, February 1, 1910, to January 31, 1941.

ACCOUNTS.	Labor.	Teaming.	Materials.	Hired and Department Machinery.	Contracts.	Miscellaneous.	Totals.
Engineers' salaries.....	\$23,229 08	.....	.....	.....	.....	.....	\$23,229 08
Engineers' expense.....	288 61	\$39 50	.....	.....	.....	.....	3,732 90
Office salaries.....	8,720 16	.....	.....	.....	.....	.....	8,720 16
Pumping station.....	.....	.....	.....	.....	\$2,604 56	234 89	2,839 45
Sundries.....	155 25	10 91	\$95 26	.....	3,410 00	476 77	4,148 19
Land-takings and court executions.....	.....	.....	.....	.....	9,788 88	9,788 88	9,788 88
New manholes, entire city.....	424 12	107 25	390 30	.....	.....	3 10	924 77
New catch-basins, South Boston.....	100 27	19 50	113 01	.....	.....	.....	232 78
New catch-basins, East Boston.....	141 63	21 50	181 31	.....	.....	.....	344 44
New catch-basins, Brighton.....	317 45	67 00	345 50	.....	.....	.....	729 95
New catch-basins, West Roxbury.....	620 16	90 00	253 00	.....	.....	.....	963 16
New catch-basins, Dorchester.....	2,846 59	632 79	1,069 83	.....	.....	23 67	4,572 88
New catch-basins, Roxbury.....	898 90	178 27	1,030 68	.....	.....	2 00	2,109 85
New catch-basins, City Proper.....	298 50	101 25	315 66	.....	.....	6 62	722 03
Sewers built in entire city.....	58,917 94	5,615 07	18,991 64	\$3,170 33	61,932 40	9,280 49	157,907 87
Totals.....	\$96,958 66	\$6,883 04	\$22,786 19	\$3,170 33	\$67,946 96	\$23,221 21	\$220,966 39

**Sewerage Works.**

LOCATION.	Built by .	Labor.	Teaming.	Materials.	Hired and Department Machinery.	Miscellaneous.	Engineering.	Contracts.	Totals.	Remarks.
A street, from West First street to Richards street, South Boston.	Day labor . . .	\$1,177 64	\$169 50	\$532 32	.....	\$128 26	\$62 00	.....	\$2,069 72	
Antrim street, from Bennington street to Ashley street, East Boston.	Day labor . . .	1,368 83	124 50	470 71	.....	11 30	17 50	.....	1,992 84	2 catch-basins included.
Atlantic avenue and Commerce street, . . . . .	Day labor . . .	8,678 32	1,152 00	2,528 57	\$1,389 00	692 64	294 00	.....	14,734 53	
Addison street, from Saratoga street to Pope street, East Boston.	Day labor . . .	3,788 08	290 00	618 68	.....	111 29	98 00	.....	*4,906 05	
368 Atlantic avenue at Central street, city proper, Addison street, from Chelsea Creek to Sartoga street, East Boston.	Day labor . . .	2,196 24	256 40	344 66	173 00	218 22	110 00	.....	3,298 52	
Ashley street, from Breed street, 293 feet west, East Boston.	Day labor . . .	4,065 85	201 50	997 03	.....	25 85	125 00	.....	*5,415 23	14 catch-basins included.
Albany and Seneca streets, city proper . . . . .	Day labor . . .	736 05	41 84	220 02	.....	5 03	.....	.....	26 83	Built in 1909.
Baker avenue, from Quincy street, 346 feet east, Dorchester.	Day labor . . .	521 68	49 73	213 40	.....	13 01	24 00	.....	247 89	Built in 1909.
Balfour street, from Dalkeith street, 170 feet south, Dorchester.	Day labor . . .	.....	.....	390 40	.....	23 56	.....	.....	1,044 15	
Beaumont street, from Adams street to Carruth street, Dorchester.	Day labor . . .	.....	.....	216 75	500 62	218 00	179 38	.....	821 82	2 catch-basins included.
Beverly street, from Causeway street at junction, city proper.	Day labor . . .	.....	.....	771 51	78 00	679 71	36 86	28 00	413 96	Built in 1909.
Dannell street, from Dorchester avenue to Old Colony avenue, South Boston.	Day labor . . .	.....	.....	.....	.....	.....	.....	.....	1,114 75	Built in 1909.
									1,594 08	8 catch-basins included.

Drayton avenue, from 200 feet northeast of Quincy street to 154 feet northeast, Dorchester.	Day labor . . .	322 71	28 26	78 19	5 10	28 00	462 26
Downer avenue from DeWolf street, 234 feet northwest, Dorchester.	Contract . . .	18 75	18 18	4 00	10 00	\$391 15	442 08
Edgewater drive from Tokio street, to Tesla street, Dorchester.	Contract . . .	10 50	10 85	3 90	33 00	310 20	*368 45
Faneuil Hall square from Merchants row to Corn court, city proper.	Day labor . . .	1,047 64	223 02	373 65	72 72	250 93	68 90
Friend street, from Travers street to Market street, city proper.	Contract . . .	283 75	2 98	13 10	32 10	146 00	4,063 42
Farnham street, from Hampden street to Reading street, Roxbury.	Day labor . . .	228 90	.....	.....	.....	15 00	*243 90
Ford and Breed streets, East Boston. . . . .	Day labor . . .	.....	114 08	2 90	.....	.....	116 98
Geneva avenue, from Bowdoin street to Columbia road, Dorchester.	Contract . . .	378 25	2 98	111 72	500 00	5,940 07	Built in 1909. *6,933 02 12 catch-basins included.
Geneva avenue, from Columbia road to Blue Hill avenue, Dorchester.	Contract . . .	303 00	.....	271 86	46 20	350 00	7,669 87
Homes avenue, from 350 feet west of Hamilton street to Hamilton street, Dorchester.	Day labor . . .	862 88	22 50	.....	.....	60 00	*945 38
Juliette street, from Fox street to Homes avenue, Dorchester.	Contract . . .	77 00	.....	50 10	.....	30 55	21 00
Kemp street, overflow from Columbia road to 100 feet east, Dorchester.	Day labor . . .	3,325 40	387 50	1,379 08	414 00	252 40	75 00
Kimball street, overflow from private land east of Freeport street, Dorchester.	Contract . . .	617 00	2 21	321 95	.....	339 73	326 00
Leyden street, from Breed street to 1,200 feet west, East Boston.	Day labor . . .	2,757 48	270 25	678 56	.....	215 56	27 50

\* Not complete.

Sewerage Works.—Concluded.

LOCATION.	Built by	Labor.	Teaming.	Materials.	Hired and Depart- ment Ma- chinery.	Miscel- lanous.	Engineer- ing.	Contracts.	Totals.	Remarks.
Leicester street, from Charles street to 132 feet west, city proper.	Day labor.....	\$118 03	\$243 53	\$80 00	\$148 60 .....	.....	.....	\$37 64	\$627 80	Built in 1906.
Mercantile row, from North Market street to Faneuil Hall square, city proper.	Day labor....	\$1,862 46	396 48	656 82	129 28	453 05	\$122 98 .....	.....	3,621 07	
Mallon road, from Rosseter street to Bowdoin avenue, Dorchester.	Contract.....	66 50 .	.....	.....	.....	3 70	105 00	603 03	*778 23	
Mercantile street, from Richmond street to Clinton street, city proper.	Day labor....	502 66 .	.....	.....	.....	.....	43 00 .....	.....	*545 66	
North Market street, from Commercial street to Faneuil Hall square, city proper.	Contract.....	225 00	4 42	83 62 .....	.....	27 14	87 12	6,892 52	7,319 82	Began in 1909.
Neptune road and Lubec street, East Boston.	Day labor....	2,911 27	216 00	639 08 .....	.....	25 58	50 00 .....	.....	3,841 93	
New way, from Walnut street to railroad, Dorchester.	Day labor....	823 66	43 94	337 57 .....	.....	.....	30 00 .....	.....	*1,235 17	
Norfolk street, from Blue Hill avenue to Fremont street, Dorchester.	Contract.....	122 50 .	.....	.....	.....	4 20	80 00	744 80	*951 50	
Northern avenue, from Atlantic avenue to Northern Avenue Bridge, city proper.	Day labor....	1,996 46	69 75 .....	.....	.....	.....	161 00 .....	.....	*2,227 21	
North street, from North Centre street to 165 feet north, city proper.	Day labor....	.....	.....	111 01 .....	.....	.....	.....	.....	111 01	Built in 1909.
Porter street, from 60 feet northeast of Frankfort street to 35 feet southeast of Cottage street, East Boston.	Contract.....	771 00 .	.....	.....	.....	4 31	121 89	7,254 31	*8,151 51	Began in 1909.
Pitts street, from Merrimac street to Pitts court, city proper.	Day labor....	3,841 71	369 00	1,956 74	646 33	299 96	175 00 .....	.....	7,288 74	

Park street, from Waldeck street to Green-	Contract.....	52 50 .....	44 90 .....	4 00	107 00	1,705 09	1,913 49
brier street, Dorchester.	Day labor....	\$21 35	9 00 .....	.....	18 00 .....	.....	*848 35
Private land, from southeast of West Selden	Day labor....	1,102 01	80 25 .....	48 00 .....	68 00 .....	.....	*1,298 26
street to near Holborn street, Dorchester.	Day labor....	.....	.....	.....	.....	.....	.....
Randlett place, from Brookford street to 157	Day labor....	.....	.....	.....	.....	.....	.....
feet south, Roxbury.	.....	.....	.....	.....	.....	.....	.....
Rockdale and Rosewood streets, Dorchester.	Contract....	318 50	2 98 .....	4 00	140 00	1,927 86	*2,393 34
Robinson court and private land, Dorchester,	Day labor....	1,187 97	4 50 .....	.....	70 00 .....	.....	*1,262 47
Saratoga street, from Boardman street to 200	Day labor....	1,165 12	102 00	254 53 .....	5 35	18 38 .....	1,545 38
feet west, East Boston.	Day labor....	.....	.....	.....	.....	.....	.....
Saratoga street, from 100 feet west of Benning-	Day labor....	302 23	21 00	36 41 .....	.....	12 00 .....	.....
ton street, to 80 feet west, East Boston.	Day labor....	.....	.....	794 49 .....	655 91 .....	.....	.....
South Market street and Atlantic avenue,	Day labor....	.....	.....	.....	.....	.....	.....
city proper.	Day labor....	.....	.....	.....	.....	.....	.....
Tenane creek, from Westville street to Speed-	Day labor....	5,406 07	499 73	2,465 93 .....	99 93	278 00 .....	*8,749 66
well street, Dorchester.	Day labor....	249 55	48 75 .....	.....	.....	12 00 .....	*310 30
Tremont street, from Kendall street to Ham-	Day labor....	.....	.....	.....	.....	.....	.....
mond street, Roxbury.	.....	.....	.....	.....	.....	.....	.....
Tilston School lot, from Norfolk street to	Day labor....	468 19	16 36	88 43 .....	3 05	16 00 .....	*392 03
280 feet east, Dorchester.	Day labor....	.....	.....	.....	.....	.....	.....
Tenean creek, from Mill street to 903 feet	Contract....	.....	6 75	40 02 .....	.....	7,017 04	7,063 81
north, Dorchester.	Contract....	.....	.....	.....	.....	.....	Built in 1909.
Whitby street, from Ford street to 320 feet	Day labor....	846 02	82 50	223 74 .....	16 92	17 00 .....	1,186 18
north, East Boston.	Day labor....	.....	.....	.....	.....	.....	.....
Washington and Fuller streets.....	Contract....	222 25	2 21	69 30 .....	51 90	290 00	3,781 74
Wool street, from E street to D street, South	Contract....	115 50	1 50	39 20 .....	38 80	37 00	2,581 74
Boston.	Contract....	.....	.....	.....	.....	.....	.....
Washington and Mora streets, Dorchester...	Contract....	.....	.....	.....	.....	493 03	493 03
Totals.....	.....	\$58,917 94	\$5,615 07	\$18,991 64	\$3,170 33	\$4,765 22	\$4,515 27
						\$61,932 40	\$157,907 87

\* Not complete.

**Sewerage Works Loan, 1910-11, Detail.**

Engineers' salaries, general, including chief inspector . . . . .	\$16,251 57
Surveyors, weekly . . . . .	6,144 51
Surveyors, monthly . . . . .	833 00
	<hr/>
Amount charged to construction of sewers . . . . .	\$23,229 08
	4,515 27
	<hr/>
Total engineers' salaries . . . . .	\$27,744 35

**ENGINEERS' EXPENSE.**

Labor . . . . .	\$288 61
City teams . . . . .	39 50
Car fares . . . . .	166 05
Rubber goods . . . . .	46 71
Photos . . . . .	50 00
Stationery and supplies . . . . .	2,388 62
Borings . . . . .	577 65
Printing . . . . .	175 76
	<hr/>
Total . . . . .	\$3,732 90

**COURT EXECUTIONS AND AWARDS ON ACCOUNT OF LAND-TAKINGS, ETC.**

W. H. Shuffield, Fairview street, court execution . . . . .	\$392 60
F. B. Viaux, Stony brook improvement, court execution . . . . .	521 95
Natick Five Cents Savings Bank, Talbot avenue high level sewer, court execution . . . . .	187 28
Dennis S. Ryan, Walk Hill street, court execution . . . . .	702 60
G. M. Bryne Company, Florence street brook, court execution . . . . .	1,506 08
Ellen T. Norton, Stony brook, Street Commissioners' award, . . . . .	100 00
William J. Barry, Westland entrance, court execution . . . . .	858 71
C. J. Jacobs, Wachusett street, court execution . . . . .	462 61
J. McMorrow, Fessenden street, court execution . . . . .	624 85
T. J. Shea, Avalon road, court execution . . . . .	432 88
W. J. Gaffney, Trustee, Putnam and Glendon streets, court execution . . . . .	527 43
Mary Demarchi, Ashley street, Street Commissioners' award, . . . . .	100 00
D. Marr & Son, Malta street, court execution . . . . .	63 13
P. Meehan, Stony brook, Street Commissioners' award . . . . .	100 00
J. E. Strauss, Hewlett street brook, Street Commissioners' award . . . . .	270 00
J. A. Rooney, Florence street, court execution . . . . .	555 93
E. Graham, Stanwood street, court execution . . . . .	400 00
James McGovern, Adams street, court execution . . . . .	638 21
George J. Regan, Harold street, court execution . . . . .	404 05
George J. Regan, Fremont place, court execution . . . . .	362 30
R. Eagar, Walnut avenue, court execution . . . . .	312 27
D. E. Coleman, Malcolm and Central streets, court execution, . . . . .	266 00
	<hr/>
Total . . . . .	\$9,788 88

## SEWERAGE WORKS LOAN.

New Catch-basins Paid for, February 1, 1910, to January 31, 1911. (Contract and Day Labor.)

DISTRICT.	Built by	BUILT IN 1910.		Total Expenditure.	Location.	Number Contract-basins Built.	Number Contract-basins Rebuilt.
		BUILT IN 1909. Material, etc.	DAY LABOR COST. Labor.				
New catch-basins, South Boston.....	{ Day labor.....	\$47 74	\$100 27	\$84 77	\$185 04 Ralston street .....	1	
				47 74			
				\$232 78			
New catch-basins, East Boston.....	Day labor.....	\$46 13	\$55 94	\$102 07 Breed street.....		1	
New catch-basins, East Boston.....	Day labor.....	34 80	53 08	88 48 Border street.....		1	
New catch-basins, East Boston.....	Day labor.....	60 70	76 02	136 72 Marion street.....		1	
				17 17			
New catch-basins, Brighton.....	Day labor.....	\$17 17	\$141 63	\$185 64 \$344 44	Cambridge street .....	3	
New catch-basins, Brighton.....	Day labor.....	\$56 43	\$35 72	\$92 15		1	
New catch-basins, Brighton.....	Day labor.....	101 95	137 27	239 22 Commonwealth avenue.....		2	
New catch-basins, Brighton.....	Day labor.....	159 07	170 01	329 08 Cleveland circle.....		2	
		\$69 50		69 50			
		\$69 50	\$317 45	\$343 00	\$729 95		5

*Sewerage Works Loan.—Continued.*  
*New Catch-basins Paid for, February 1, 1910, to January 31, 1911. (Contract and Day Labor.)*

DISTRICT.	Built by	BUILT IN 1910.			Location.	Number Catch-basins Built. Rebuilt. Number Catch-basins Rebuilt.
		BUILT IN 1909. Material, etc.		DAY LABOR COST.		
		Labor.	Material and Teaming.	Total Expendi- ture.		
New catch-basins, West Roxbury.....	Day labor.....	\$89 56	\$52 20	\$141 76	Robert street.....	1
New catch-basins, West Roxbury.....	Day labor.....	201 62	153 99	355 61	Walk Hill and Wenham sts...	2
New catch-basins, West Roxbury.....	Day labor.....	290 08	135 41	425 49	Williams street*.....	4
New catch-basins, West Roxbury.....	Day labor.....	38 90	.....	38 90	Spaulding street*.....	1
	Day labor.....	\$1 40	.....	1 40		
New catch-basins, Roxbury.....	Day labor.....	\$620 16	\$341 60	\$963 16		8
New catch-basins, Roxbury.....	Day labor.....	\$83 96	\$131 69	\$215 65	Round Hill street.....	2
New catch-basins, Roxbury .....	Day labor.....	76 85	129 18	206 03	Rockdale and Cobden streets,	2
New catch-basins, Roxbury .....	Day labor.....	43 80	64 80	108 60	Harold and Howland streets..	1
New catch-basins, Roxbury .....	Day labor.....	122 44	123 56	246 00	Holworthy and Harold streets,	2
New catch-basins, Roxbury .....	Day labor.....	78 71	44 20	122 91	Amory street*.....	1
New catch-basins, Roxbury .....	Day labor.....	157 60	325 70	483 30	Leon street.....	6
New catch-basins, Roxbury .....	Day labor.....	93 29	102 83	196 12	Juniper street.....	2

New catch-basins, Roxbury.....	Day labor.....	30 56	35 42	65 98	Lawn street.....	1
New catch-basins, Roxbury.....	Day labor.....	98 93	66 71	165 64	Massachusetts avenue.....	1
New catch-basins, Roxbury.....	Day labor.....	64 26	20 37	84 63	Greenleaf street*.....	1
New catch-basins, Roxbury.....	Day labor.....	48 50	26 47	74 97	Dorr street*.....	1
New catch-basins, Roxbury.....	\$140 02	.....	.....	140 02		
						20
New catch-basins, city proper.....	Day labor.....	\$100 22	\$141 12	\$211 34	Washington street, No. 695.....	1
New catch-basins, city proper.....	Day labor.....	60 20	83 02	143 22	Albany street.....	1
New catch-basins, city proper.....	Day labor.....	45 48	88 46	133 94	North Market street.....	1
New catch-basins, city proper.....	Day labor.....	48 45	94 04	142 49	Beach street.....	1
New catch-basins, city proper.....	Day labor.....	44 15	.....	44 15	Charles street*.....	1
New catch-basins, city proper.....	\$16 89	.....	.....	16 89		
						5
New catch-basins, Dorchester.....	Day labor.....	\$298 50	\$406 64	\$722 03		
New catch-basins, Dorchester.....	Day labor.....	\$105 70	\$83 90	\$89 60	Dacia street.....	1
New catch-basins, Dorchester.....	Day labor.....	274 84	194 03	468 87	Taft street, Dorchester avenue and Pleasant street.....	3
New catch-basins, Dorchester.....	Day labor.....	64 95	75 61	140 56	Washington street.....	1
New catch-basins, Dorchester.....	Day labor.....	356 79	93 43	450 22	Rosemont street*.....	5
New catch-basins, Dorchester.....	Day labor.....	401 21	201 35	602 56	Welles avenue*.....	5
New catch-basins, Dorchester.....	Day labor.....	100 21	100 51	200 72	Claybourne street*.....	1
New catch-basins, Dorchester.....	Day labor.....	52 10	56 67	108 77	Greenwood street*.....	1
New catch-basins, Dorchester.....	Day labor.....	126 95	61 71	188 66	Park street*.....	1
New catch-basins, Dorchester.....	Day labor.....	156 10	97 31	253 41	Eastman street*.....	2

\* Not complete.

*New Catch-Basins Paid for, February 1, 1910, to January 31, 1911. (Contract and Day Labor.)*

DISTRICT.	Built by	BUILT IN 1910.		Total Expenditure.	Location.	Number Catch-basins Built.	Number Catch-basins Rebuilt.	Number Catch-basins Rebuilt.
		BUILT IN 1909. Material, etc.	DAY LABOR COST.					
		Labor.	Material and Teaming.					
New catch-basins, Dorchester.....	Day labor.....	\$178 75	\$175 14	\$353 89	Geneva avenue*	.....	3	3
New catch-basins, Dorchester.....	Day labor.....	39 91	25 68	65 59	Washington street*	.....	1	1
New catch-basins, Dorchester.....	Day labor.....	86 96	7 28	94 24	Rowena street*	.....	1	1
New catch-basins, Dorchester.....	Day labor.....	63 20	37 11	100 31	Mather street*	.....	1	1
New catch-basins, Dorchester.....	Day labor.....	133 85	4 42	138 27	Westcott street*	.....	2	2
New catch-basins, Dorchester.....	Day labor.....	127 60	79 42	207 02	Hancock street*	.....	2	2
New catch-basins, Dorchester.....	Day labor.....	89 48	120 64	210 12	Granville street*	.....	2	2
New catch-basins, Dorchester.....	Day labor.....	298 99	175 03	474 02	Ingraham and Normandy streets*	.....	4	4
New catch-basins, Dorchester.....	Day labor.....	152 35	9 00	161 35	Homes avenue *	.....	3	3
New catch-basins, Dorchester.....	Day labor.....	36 65	.....	36 65	West Selden street*	.....	1	1
New catch-basins, Dorchester.....	Day labor.....	\$128 05	.....	128 05				
		\$128 05	\$2,846 59	\$1,598 24	\$4,572 88			
Totals.....		\$120 77	\$5,293 50	\$4,030 82	\$9,675 09			
							40	40
								82

\* Not complete.

New Catch-basins paid for, February 1, 1910, to January 31, 1911. (Included in other Sewer Construction.)

## Sewerage Works.—New Manholes.

LOCATION.	Built by.	Number.	Labor.	Teaming.	Material.	Totals.	Begun.	Finished.
Devonshire street, at Congress square.....	Day labor.....	\$11 50	\$1 50	\$0 89	*\$13 89	April 25, 1910		
Leverett street.....	Day labor.....	20 25	.....	28 34	*20 25	July 28, 1910		
Mercantile street, 85 feet south of Clinton street.....	Day labor.....	49 72	8 25	86 31	May 2, 1910	May 10, 1910		
Endicott street, 25 feet north of Stillman street.....	Day labor.....	26 40	6 00	35 11	67 51	April 20, 1910	April 22, 1910	
Battery-march street, at High street.....	Day labor.....	74 82	12 00	45 91	132 73	April 27, 1910	May 7, 1910	
Greenwich park, 75 feet west of Columbus avenue.....	Day labor.....	54 82	12 00	26 92	93 74	May 23, 1910	May 31, 1910	
Greenwich park, rear of.....	Day labor.....	14 02	3 00	23 43	40 45	May 23, 1910	May 24, 1910	
Albany street, between Oak and Harvard streets.....	Day labor.....	40 48	9 00	29 51	78 99	May 11, 1910	May 19, 1910	
East Fifth street, at No. 636.....	Day labor.....	39 73	9 00	31 35	80 08	Oct. 10, 1910	Oct. 13, 1910	
North street, at Power court.....	Day labor.....	20 10	9 00	26 23	55 33	Nov. 15, 1910	Nov. 16, 1910	
Ferdinand street, at Isabella street.....	Day labor.....	38 08	13 50	.....	+51 58	Dec. 20, 1910	Dec. 26, 1910	
Sycamore street, at Florence street.....	Day labor.....	19 60	3 00	17 24	39 84	Mar. 9, 1910	Mar. 10, 1910	
Leverett street, at No. 12.....	Day labor.....	14 60	7 50	19 78	41 88	June 22, 1910	June 23, 1910	
<b>Totals</b> .....	.....	11	\$424 12	\$93 75	\$284 71	\$802 58		
Paid in 1910 — manholes built in 1909.....	.....	.....	.....	13 50	108 69	122 19		
<b>Totals</b> .....	.....	.....	\$424 12	\$107 25	\$393 40	\$924 77		

\* Begun, not finished.

† Not complete.

**Separate Systems of Drainage.***Expenditures, February 1, 1910, to January 31, 1911.*

ACCOUNTS.	Labor.	Teaming.	Materials.	Hired and Department Machinery.	Contracts.	Miscellaneous.	Totals.
Engineers' salaries.....	\$43,293 78	.....	.....	.....	.....	.....	\$43,293 78
Engineers' expense.....	2,242 40	\$113 22	.....	.....	.....	.....	6,038 57
Sundries.....	611 86	141 22	\$281 09	.....	.....	1,519 11	2,553 28
New catch-basins, Brighton.....	180 71	27 00	172 93	.....	.....	.....	380 64
New catch-basins, West Roxbury.....	510 80	110 30	489 31	.....	.....	.....	1,110 41
New catch-basins, Dorchester.....	782 74	85 21	156 27	.....	.....	.....	1,024 22
New catch-basins, Roxbury .....	160 04	37 85	243 69	.....	.....	.....	441 58
Sewers built in entire city.....	185,318 67	17,506 71	62,090 46	\$9,262 05	\$385,432 56	27,689 86	687,300 31
Totals.....	\$233,101 00	\$18,021 51	\$63,433 75	\$9,262 05	\$385,432 56	\$32,801 92	\$742,142 79

**Separate Systems of Drainage.**

*Sewers and Surface Drains Built by the City February 1, 1910, to January 31, 1911.*

LOCATION.	Built by	Labor.	Teaming.	Materials.	Hired and Department Machinery.	Miscellaneous.	Engineering.	Contracts.	Totals.	Remarks.
Abbott street, from 170 feet east of Willow street to 150 feet east, West Roxbury.	Day labor....	\$559 82	\$48 00	\$83 61	.....	\$5 00	\$24 00	.....	\$720 43	
Allen and Pelton streets, West Roxbury.	Contract.....	113 75	.....	48 28	.....	4 10	16 75	\$1,227 67	1,410 55	
Augustus avenue and Ethel streets, West Roxbury.	Contract.....	49 00	.....	35 04	.....	4 20	22 00	949 78	1,060 02	
Ainsworth street, from South street to Centre street, West Roxbury.	Contract.....	56 00	.....	113 45	.....	4 20	25 00	1,056 34	1,254 99	4 catch-basins included.
Atkins street, from Hunnewell avenue to 100 feet north of Stratton street, Brighton.	Contract.....	36 75	.....	23 70	.....	4 30	30 00	519 91	614 66	
Ardale street, from Walter street to Centre street, West Roxbury.	Day labor....	3,685 02	252 95	1,295 26	.....	.....	.....	.....	*\$5,233 23	
Arbutus street, from Ashton street to Blue Hill avenue, Dorchester.	Contract.....	66 50	.....	.....	.....	4 10	48 00	.....	*118 60	
Aldrich street, from Beech street to Belgrave avenue, West Roxbury.	Day labor....	.....	.....	.....	.....	5 26	.....	.....	5 26	Built in 1909.
Avenue Louis Pasteur, Roxbury.	Day labor....	.....	.....	.....	\$523 50	.....	.....	.....	523 50	Built in 1909.
Berry street, from Canterbury street to Sutton street, West Roxbury.	Day labor....	3,013 45	273 00	430 28	.....	66 35	24 00	.....	3,807 08	
Beech street, from railroad, 130 feet north, to junction of Centre street and Manthorne road, West Roxbury.	Contract.....	35 00	.....	24 92	.....	3 90	29 00	430 65	523 47	
Beacon street, from Ayr road to Cleveland circle, Brighton.	Contract.....	56 00	.....	22 70	.....	4 20	64 00	1,040 85	1,187 75	

Brookline avenue, from Audubon road to Fenway, Roxbury.	Contract.....	492 50	10 00	189 08.....	2 88	54 50	3,874 64	4,533 60	Begun in 1909.
Bull street, from Shawmut avenue to Washington street, Roxbury.	Day labor....	2,658 84	250 85	167 58	85 00	24 34	213 00.....	* 3,399 61	
Brenton street, from Greenwood street to Glenway street, Dorchester.	Day labor....	825 76	81 76	200 22.....	11 20	60 00.....	.....	* 1,178 94	1 catch-basin included.
Bradford avenue, from South street to Centre street, West Roxbury.	Day labor....	572 50	.....	.....	.....	25 00	.....	* 597 50	
Chestnut Hill avenue, from Dighton street to Wallingford road, Brighton.	Day labor....	6,694 84	885 75	1,643 63	734 67	270 82	150 00.....	10,379 71	
Cabot street, from Sterling street to Tremont street, Roxbury.	Contract.....	140 00	.....	168 74	.....	30 70	180 00	3,210 61	3,730 05
Centre street, from 100 feet north of Cotage avenue to La Grange street, West Roxbury.	Contract.....	245 00	.....	38 80	.....	4 40	94 00	3,908 77	4,290 97
Canterbury Branch Stony brook, Asylum road to Harvard street, West Roxbury.	Contract.....	604 25	13 31	.....	.....	113 55	1,477 00	18,958 24	* 21,166 35
Commonwealth and Chestnut Hill avenues, Brighton.	Contract.....	318 50	.....	.....	.....	4 30	180 00	6,250 23	* 6,753 03
Corey road, from Washington street to Wellington road, Brighton.	Contract.....	175 00	.....	62 00	.....	4 20	90 00	3,499 01	3,830 21
Clifton street, from Kittredge street to Albano street, West Roxbury.	Contract.....	91 00	.....	.....	.....	4 10	62 00	1,081 10	* 1,238 20
Canterbury street, from Gilman street to 400 feet northeast of Mt. Hope street, West Roxbury.	Day labor....	.....	.....	7 53	.....	.....	.....	7 53	Built in 1909.
Dighton street, from Chestnut Hill avenue to 300 feet west, Brighton.	Contract.....	24 50	.....	77 64	.....	6 63	322 76	431 53	2 catch-basins included, began 1909.

\* Not complete.

Separate Systems of Drainage.—Continued.

LOCATION.	Built by	Labor.	Teaming.	Materials.	Hired and Department Machinery.	Miscel-laneous.	Engineering.	Contracts.	Totals.	Remarks.
Davenport street, from Tremont street to Columbus avenue, Roxbury.	Day labor....	\$523 52	\$80 25	\$249 15 . . . . .		\$2 72	\$52 00 . . . . .		* \$807 64	
Dartmouth street, from Beacon street to Boylston street, city proper.	Contract.....	575 00 . . . . .				40 60	361 00	\$19,609 34	*20,585 94	
Danville street, from Wren street to 250 feet west, West Roxbury.	Contract.....	14 00 . . . . .		11 10 . . . . .		4 20	18 00	229 17	276 47	
Dartmouth street, from Boylston street to Huntington avenue, city proper.	Day labor....	5,337 23	276 00	621 56	\$246 50	87 60	117 00 . . . . .		* 6,685 89	
382 Dyer and Ufford streets, Dorchester.	Contract.....	94 50 . . . . .				3 70	123 00	1,654 86	* 1,876 06	
Edgar street, from Mechanic street to Parker street, Roxbury.	Day labor....			409 84 . . . . .					409 84	Built in 1909.
Emmons road, and Howitt road, West Roxbury.	Contract.....	82 25 . . . . .				4 20	60 00	2,382 16	*2,528 61	
Easton street, from North Harvard street to 185 feet west, Brighton.	Day labor....	253 02 . . . . .					10 00 . . . . .		* 263 02	
Elmo street, from Greenwood street to Erie street, Dorchester.	Contract.....							138 44	138 44	Built in 1909.
Fenway, from Brookline avenue to Avenue Louis Pasteur, Roxbury.	Contract.....			50 36 . . . . .			55 60	3,007 82	3,113 78	Began in 1909.
Fenway, from Fens pond to Vila street, Roxbury.	Day labor....	2,581 01	236 17	1,052 02	145 00	189 49	100 00 . . . . .		* 4,303 69	
Fenway, from Avenue Louis Pasteur to Worthington street, Roxbury.	Day labor....	205 00	14 37	365 15	90 00	358 72	41 85	295 20	1,370 29	Began in 1909.

Fowler street, from Greenwood street to 113 feet west, Dorchester.	Day labor.....	20 25	106 96 .....	.....	.....	.....	.....	127 21	Built in 1909.
Frawley street, from Fenwood road to 140 feet southwest, Roxbury.	Day labor....	287 10	12 00	78 10 .....	1 80	35 00 .....	.....	414 00	
Faxon street, from Kilton street to Wash- ington street, Dorchester.	Day labor....	622 58 .....	267 91 .....	346 04 .....	.....	.....	.....	1,236 53	Begun in 1909.
Fletcher street, from South street to Centre street, West Roxbury.	Day labor....	.....	2 72 .....	.....	.....	.....	.....	2 72	Built in 1909.
Tarquinhar street, from South street to Centre street, West Roxbury.	Contract.....	.....	.....	.....	.....	1,030 86	.....	1,030 86	Built in 1909.
Grew avenue, from Poplar street to Hyde Park line, West Roxbury.	Contract.....	.....	.....	.....	.....	1,467 07	.....	1,467 07	Built in 1909.
Gainsborough street and St. Botolph street, Roxbury.	Contract....	202 50	5 92	96 72 .....	62 28	117 00	4,774 05	.5,258 47	
33 Greenwich street, from Warwick street to Westminster street, Roxbury.	Day labor....	1,861 03	317 35	414 34	178 00	37 98	105 00 .....	* 2,913 70	
Greenwood street, from Brenton street to Harvard street, Dorchester.	Day labor....	731 77	88 65	263 66 .....	20 88	110 00 .....	.....	* 1,214 96	
Hewlett street brook in Roslindale Play- ground, West Roxbury.	Day labor.....	.....	24 75	293 04 .....	29 46 .....	.....	.....	347 25	Built in 1909.
Hewlett street brook, from Farquhar street to Centre street, West Roxbury.	Day labor....	16,035 34	883 90	4,926 50	1,204 67	462 44	417 00 .....	* 23,929 85	Begun in 1909.
Harvard street, from Hansborough street to Johnston road, Dorchester.	Day labor....	903 76	55 10	153 63 .....	18 17	16 00 .....	.....	1,146 66	
Haskins street, from Ruggles street to Ver- non street, Roxbury.	Day labor....	723 37	161 42	529 18 .....	11 90	67 00 .....	.....	* 1,492 87	

\*Not complete.

**Separate Systems of Drainage.—Continued.**

Location.	Built by	Labor.	Teaming.	Materials.	Hired and Department Machinery.	Miscellaneous.	Engineering.	Contracts.	Totals.	Remarks.
Harvard avenue, from Washington street to Harvard street, Dorchester.	Day labor....	\$1,423 38	\$135 22	\$479 15 .....		\$16 18	\$54 00 .....		*\$2,107 93	2 catch-basins included.
Hyde Park avenue, from Hadwin way to Hyde Park line, West Roxbury.	Contract ....	670 25	16 50	586 48 .....		52 93	175 00	\$8,804 63	10,305 79	12 catch-basins included.
Hyde Park avenue, from 60 feet north of Tower street to Walk Hill street, West Roxbury.	Contract.....	108 50 .	.....	257 77 .....		4 10	78 00	2,317 53	2,765 90	
33 Iola street, from Talbot avenue to Tonsay street, Dorchester.	Day labor....	430 06	28 38	210 56 .....		12 42	30 00 .....		711 42	
Johnston road, from Harvard street to 510 feet east, Dorchester.	Contract....	110 25 .	.....	12 20 .....		34 94	30 00	1,978 56	1,265 95	
Kingsbury street, from Galena street to Kensington street, Roxbury.	Day labor....	197 59	4 50	378 80 .....		1 79 .....	.....		114 16	Built in 1909.
Keyes street, from Meehan street to Washington street, West Roxbury.	Day labor....	2,735 85	455 93	2,040 35 .....		28 21 .....	.....		609 10	Began in 1909.
Kilton street, from Harvard street to Faxon street, Dorchester.	Day labor....	3,656 11	308 33	1,420 34 .....		116 00 .....	.....		5,348 13	Began in 1909.
Kilton street, from Faxon street to Washington street, Dorchester.	Day labor....	212 67	34 50	143 13 .....		8 13	40 00 .....		5,721 68	
Kempton street, from Fenwood road to Huntington avenue, Roxbury.	Day labor....	531 23 .	.....	.....		30 00 .....	.....		438 43	
Kewin street, from Talbot avenue to Bernard street, Dorchester.	Day labor....								* 561 23	

Knoll street, from Selwyn street to Walter street, West Roxbury.	Day labor . . .	569 52 . . . . .	7 00 . . . . .	*576 52
Longwood avenue, from Brookline avenue to Huntington avenue, Roxbury.	Day labor . . .	3,425 60	415 25	910 85 . . . . .
Long avenue, from Commonwealth avenue to Allston street, Brighton.	Day labor . . .	2,074 97	219 75	1,060 93 . . . . .
Lasell street, from Temple street to 100 feet west, West Roxbury.	Day labor . . .	168 43	21 00	40 04 . . . . .
Lucerne street, Claxton, Floyd and Stratton streets, Colonial and Massasoit avenues, Dorchester.	Contract . . . . .	288 50	1 49	307 80 . . . . .
Liebfeld street, from Western avenue to Lincoln street, Brighton.	Day labor . . .	1,037 56	155 50	1,086 29 . . . . .
Lorette street, from Centre street to Hill- crest street, West Roxbury.	Contract . . . . .	73 50 . . . . .	.....	122 86 . . . . .
Market street and Chestnut Hill avenue, Brighton.	Day labor . . .	7,342 19	1,020 50	1,641 94 \$695 72
Mt. Hope street, from Canterbury street to Mt. Hope Cemetery, West Roxbury.	Day labor . . .	179 36	66 00	211 20 . . . . .
Mozart place, from Preising street to Mozart street, Roxbury.	Contract . . . . .	28 00 . . . . .	22 84 . . . . .	516 44 . . . . .
Maynard street, from Metropolitan ave- nue to Eldridge street, West Roxbury.	Contract . . . . .	196 00 . . . . .	98 67 . . . . .	206 38 . . . . .
Madison street, from Shawmut avenue to Washington street, Roxbury.	Day labor . . .	2,707 23	441 67	957 65 400 64
Morton, Leslie and Wildwood streets, Dor- chester.	Contract . . . . .	298 75	4 47 . . . . .	206 28 . . . . .
Malvern road, from Metropolitan avenue to Ethel street, West Roxbury.	Contract . . . . .	99 75 . . . . .	.....	220 00 . . . . .

\*Not complete.

3 catch-basins  
included.

3,465 77

248 49

9,300 29

\*\*2,429 21

784 93 . . . . .

11,423 17 Begun in 1909.

456 56 Begun in 1909.

310 17 393 21

4,825 96

\*4,157 35 6 catch-basins  
included.

\*528 08

Separate Systems of Drainage.—Continued.

LOCATION.	Built by	Labor.	Teaming.	Materials.	Hired and Departmental machinery.	Miscel- laneous.	Engineer- ing.	Contracts.	Totals,	Remarks.
Nightingale street, from Talbot avenue to Bernard street, Dorchester.	Day labor....	\$3,718 74	\$387 66	\$886 91	.....	.....	\$46 09	\$134 00	.....	*\$5,173 40 3 catch-basins included.
Norfolk street and Clarkwood street, Dorchester.	Contract,....	189 00	.....	313 56	.....	39 15	120 00	\$3,562 62	4,224 33	8 catch-basins included.
Old Stony brook channels, Sections 3 and 4, Roxbury.	Contract,....	.....	.....	.....	.....	.....	.....	3,000 00	3,000 00	Built in 1908.
Old Stony brook channels, Section 5, Roxbury.	Contract,....	.....	.....	.....	.....	.....	.....	918 69	*918 69	Built in 1908-09.
386 Old Stony brook channels, miscellaneous, Roxbury.	Day labor....	.....	.....	278 21	.....	.....	.....	.....	278 21	Built in 1908-09.
Private land and Kingsdale street, Dorchester.	Day labor....	42 00	.....	219 06	.....	105 55	.....	1,901 13	2,267 74	Began in 1909. 2 catch-basins included.
Private land, from Greenwood street to Kilton street, Dorchester.	Day labor....	9,488 68	980 62	2,820 75	\$1,140 00	1,111 61	292 00	.....	15,833 66	Began in 1909.
Private land, from Harvard avenue to Princeton avenue, Brighton.	Day labor....	1,002 87	161 25	1,238 17	111 00	129 38	32 00	.....	2,674 67	Began in 1909.
Passageway south and east of St. Botolph street, Roxbury.	Day labor....	110 94	7 50	116 07	.....	3 41	28 75	.....	266 67	
Paine street, from Canterbury street to Walk Hill street, West Roxbury.	Day labor....	5,501 93	490 90	961 79	.....	109 62	142 00	.....	7,206 24	
Plainfield street, from Rossmore road to Williams street, West Roxbury.	Day labor....	597 69	69 00	362 72	.....	12 54	10 00	.....	1,051 95	3 catch-basins included.
Private land, from Stony brook to Washington street, West Roxbury.	Day labor....	1,918 48	132 00	442 76	.....	3 88	55 00	.....	*\$2,552 12	

Public Alley 807, from Bryant street to Hemenway street, Roxbury.	Day labor....	4,282 51	284 58	3,203 47	.....	154 29	156 00	.....	8,080 85
Perham street, from Lasell street to Glenham street, West Roxbury.	Day labor....	1,180 91	63 00	.....	.....	17 00	.....	.....	*1,269 91
Quint avenue, from Princeton avenue to Brighton avenue, Brighton.	Contract....	288 75	3 00	.....	.....	3 90	105 00	1,916 38	*2,317 03 4 catch-basins included.
Ruggles street, from Shawmut avenue to Washington street, Roxbury.	Day labor....	2,449 89	382 50	716 50	328 66	109 06	158 00	.....	4,144 61
Ruggles street, from Tremont street to Columbus avenue, Roxbury.	Day labor....	495 06	86 60	197 75	.....	8 78	35 00	.....	823 19
Revere street, from Charles street to Charles River Embankment.	Day labor. . .	4,014 28	606 75	1,786 54	840 00	255 81	184 00	.....	7,687 38
Roslindale branch Stony brook, from Aldrich street to Anawan avenue, West Roxbury.	Contract....	1,020 75	9 00	47 54	.....	280 51	677 00	34,446 51	*36,481 31 1 catch-basin included.
Rockview street, from 220 feet north of Robinwood avenue to Robinwood avenue, West Roxbury.	Contract....	225 75	.....	11 35	.....	4 10	52 00	751 76	*1,044 96
Roxton street, from Greenwood street to Glenway street, Dorchester.	Day labor....	850 58	45 00	.....	.....	64 00	.....	.....	*959 58 1 catch-basin included.
Radcliffe and Carmen streets, Dorchester.	Contract....	.....	.....	.....	.....	.....	305 82	.....	305 82 Begun in 1909.
South street, from Farquhar street to Centre street, West Roxbury.	Contract....	.....	.....	.....	.....	.....	1,512 67	.....	1,512 67
Smith street, from North Harvard street to 325 feet east, Brighton.	Contract....	.....	.....	18 44	.....	.....	110 41	.....	128 85
Salt Creek brook, from Ashford street to Boston & Albany Railroad, Brighton.	Day labor....	180 59	108 00	41 48	420 78	369 98	25 00	.....	1,145 83 Begun in 1909.
Shawmut avenue, from Ruggles street to Sterling street, Roxbury.	Day labor....	2,614 69	388 50	781 34	289 00	173 18	138 00	.....	4,384 71 Begun in 1909.

\*Not complete.

Separate Systems of Drainage.—Continued.

LOCATION.	Built by	Labor.	Teaming.	Materials.	Hired and Department Machinery.	Miscellaneous.	Engineering.	Contracts.	Totals.	Remarks.
Shawmut avenue, from Hammond street to Sterling street, Roxbury.	Day labor....	\$2,586 37	\$456 27	\$1,149 51	\$189 74	\$77 58	\$281 00	.....	\$4,740 47	Begun in 1909.
Standish street, from Harvard street to Greenwood street, Dorchester.	Contract....	312 87	2 21	88 38	.....	.....	126 00	\$4,275 82	4,805 28	Begun in 1909.
Stony brook conduit, Section 6, West Roxbury.	Contract....	2,436 00	.....	.....	.....	.....	1,929 00	139,740 23	*144,105 23	Begun in 1909.
33 Stony brook conduit, Section 7, West Roxbury.	Contract....	895 00	3 00	.....	.....	431 47	1,129 00	24,147 54	*26,606 01	
St. Botolph place, from St. Botolph street to 228 feet southeast, city proper.	Day labor....	590 42	30 00	340 26	.....	.....	25 00	.....	*985 68	
Selwyn street, from Mozart street to easterly branch of Selwyn street, West Roxbury.	Day labor....	6,077 70	266 75	929 50	375 00	91 85	65 00	.....	*7,805 80	
Seaver street, from 200 feet northwest Elm Hill avenue to Elm Hill avenue, Roxbury.	Day labor....	172 38	18 00	.....	.....	.....	18 00	.....	*208 38	
Talbot avenue, Westcott street, West Park street and Standish street, Dorchester.	Contract....	.....	.....	.....	.....	.....	.....	2,859 06	2,859 06	Built in 1909.
Talbot avenue, from Helen street to Blue Hill avenue, Dorchester.	Contract....	247 50	.....	191 81	.....	.....	219 25	6,218 85	6,877 41	Begun in 1909.
Talbot avenue, from Blue Hill avenue to Bernard street, Dorchester.	Day labor....	3,286 92	151 96	665 90	.....	185 89	136 00	.....	4,426 67	1 catch-basin included.

Talbot avenue, Southern avenue and Hopewell street; Whitfield, Norfolk and Washugton streets and Melville road, Dorchester.	Contract, . . . . .	368 50	4 42	280 45 . . . . .	117 52	820 00	12,635 89	14,226 78
Tremont and Cunard streets, Roxbury.	Contract, . . . . .	1,007 50	4 46	416 78 . . . . .	101 79	849 00	27,039 56	29,419 09
Tucker street, from Lauriat avenue to Callender street, Dorchester.	Contract, . . . . .	50 75	1 49	44 86 . . . . .	32 17	25 00	1,036 13	1,190 40
Tremont street, from Cunard street to Davenport street, Roxbury.	Day labor, . . . . .	5,433 52	536 52	680 87 255 00	71 89	406 00 . . . . .	*7,383 80	
Vila street, from Riverway to Longwood avenue, Roxbury.	Day labor, . . . . .	8,549 14	578 50	5,472 21 24 00	207 14	300 00	1,449 14	*16,580 13
Whitman street, from Norfolk street to Dunbar avenue, Dorchester.	Contract, . . . . .	. . . . .	. . . . .	90 76 . . . . .	. . . . .	. . . . .	593 61	684 37
Washington street, from Williams street to Arborway, West Roxbury.	Contract, . . . . .	. . . . .	. . . . .	345 20 . . . . .	. . . . .	. . . . .	213 66	558 86
Across Washington street, 400 feet north east of Arborway, West Roxbury.	Day labor, . . . . .	. . . . .	. . . . .	132 94 . . . . .	. . . . .	. . . . .	. . . . .	132 94
Washington street, from Williams street to Green street, W <sup>e</sup> st Roxbury.	Contract, . . . . .	295 00	3 00	111 44 . . . . .	. . . . .	260 00	1,333 76	*\$2,003 20
Washington street, from Keyes street to 531 feet south, West Roxbury.	Day labor, . . . . .	1,493 26	196 50	463 37 . . . . .	113 78	40 00 . . . . .	. . . . .	2,306 91
Washington street, from Keyes street to Williams street, West Roxbury.	Day labor, . . . . .	1,203 79	147 50	353 32 . . . . .	161 76	40 00 . . . . .	. . . . .	1,906 37
Washington street, from Williams street to Greenwood avenue, West Roxbury.	Day labor, . . . . .	4,699 13	523 90	681 85 85 50	327 27	122 00 . . . . .	. . . . .	6,439 64
Washington street, from Arborway to 531 feet south of Keyes street, West Roxbury.	Day labor, . . . . .	4,629 94	390 00	1,132 75 . . . . .	105 04	190 00 . . . . .	. . . . .	*6,447 73

\* Not complete.

Separate Systems of Drainage.—Concluded.

LOCATION.	Built by	Labor.	Teaming.	Materials.	Hired and Department Machinery.	Miscellaneous.	Engineering.	Contracts.	Totals.	Remarks.
Washington street at Magnolia street, West Roxbury.	Day labor....	\$63 93	\$4 50.....	.....	.....	.....	\$5 00.....	.....	*\$73 43	
Washington street, from Ball street to Williams street, Roxbury.	Day labor....	145 05	.....	.....	.....	.....	78 00.....	.....	*\$223 05	
Washington street, from Denton terrace to Metropolitan avenue, West Roxbury.	Day labor....	.....	.....	\$1 50.....	.....	.....	.....	.....	1 50	Built in 1909.
Willow street and Centre street, West Roxbury.	Contract.....	108 50	.....	.....	.....	.....	64 00.....	.....	*\$172 50	
390 Western avenue, from Everett street to Market street, Brighton.	Contract.....	224 00	.....	.....	.....	.....	\$4 50	121 00.....	.....	*\$349 50
Wait place, from Wait street westerly, Roxbury.	Contract.....	56 00	75	47 20.....	.....	3 90	77 00	\$412 65	597 50	
Westview street, from Talbot avenue to Tonset street, Dorchester.	Day labor....	816 35	57 52	218 49.....	.....	28 79	25 00.....	.....	*\$1,146 15	
Warwick street, from Windsor street to Hammond street, Roxbury.	Contract.....	196 00	75	51 05.....	.....	40 80	280 00	4,425 24	4,993 84	
Westminster street, from Windsor street to Hammond street, Roxbury.	Day labor....	1,129 13	149 92	494 35.....	.....	28 94	75 00.....	.....	1,877 34	
West Park street, from Westcott street to Warner street, Dorchester.	Day labor....	232 45	24 47	96 19.....	.....	6 11	20 00.....	.....	*\$379 22	
Worthington street, from Board of Survey street, No. 217 to Longwood avenue, Roxbury.	Day labor....	228 82	117 00	275 69.....	.....	14 06.....	.....	.....	635 57	Begun in 1909.

Windsor street, from Cabot street to Shawmut avenue, Roxbury.	Day labor . . .	10,886 34	1,975 72	4,977 15	\$894 67	884 16	477 00	.....	*20,095 04
Wales street, from Talbot avenue to Harvard street, Dorchester.	Day labor . . .	2,232 87	24 00	.....	.....	123 00	.....	.....	*2,379 87
Wallingford road, from Chestnut Hill avenue to Commonwealth avenue, Brighton.	Day labor . . .	4,458 24	311 00	1,483 78	5 00	95 86	61 00	.....	*6,414 88
Credits:									
Mechanic street, from Ruggles street to Edgar street, Roxbury.	Day labor . . .	\$185,318 67	\$17,506 71	\$62,233 41	\$9,262 05	\$9,737 09	\$17,952 77	\$385,432 56	\$687,443 26
Strathmore road, from Orkney road to Englewood avenue, Brighton.	Day labor . . .								
Totals . . . . .		\$185,318 67	\$17,506 71	\$62,090 46	\$9,262 05	\$9,737 09	\$17,952 77	\$385,432 56	\$687,300 31

\* Not complete.  
†

**Separate Systems of Drainage Loan, 1910-1911. Detail Engineering Account.**

Engineers' salaries, general . . . . .	\$43,293 78
Amount charged to construction of sewers . . . . .	17,969 77
Total engineers' salaries . . . . .	<u>\$61,263 55</u>

**ENGINEERS' EXPENSE.**

Labor . . . . .	\$2,242 40
Teaming . . . . .	113 22
Rent . . . . .	108 00
Car fares . . . . .	1,004 95
Borings . . . . .	1,550 64
Supplies . . . . .	526 91
Photos . . . . .	175 20
Towels . . . . .	19 20
Electricity . . . . .	10 30
Lumber . . . . .	238 83
Coal . . . . .	5 73
Hardware, paint, etc . . . . .	43 19
Total . . . . .	<u>\$6,038 57</u>

## SEPARATE SYSTEMS OF DRAINAGE.

## New Catch-basins Paid for, February 1, 1910, to January 31, 1911. (Contract and Day Labor.)

District.	Built by	BUILT IN 1909.	CONTRACTS.		DAY LABOR.		Total Expendi- ture.	Location.	Number of basins Built. Quality of basins Built.
		Materials, etc.	Con- tractor.	Material and Teaming.	Labor.	Material and Teaming.			
New catch-basins, Brighton.....	Day labor.....	\$133 98	.....	.....	\$180 71	\$199 93	\$380 64	Elmira street.....	4
New catch-basins, West Roxbury.....	Day labor.....	.....	.....	.....	\$115 21	\$69 83	\$133 98	Washington street at Arborway.	1
New catch-basins, West Roxbury.....	Day labor.....	.....	.....	.....	74 19	*62 82	185 04	Washington street, 400 feet northeast Arborway.	1
New catch-basins, West Roxbury .....	Day labor.....	.....	.....	.....	83 57	87 44	137 01	Washington street at Toll Gate Inn.	1
New catch-basins, West Roxbury .....	Day labor.....	.....	.....	.....	80 33	63 51	143 84	Florence street at 133, Hyde Park avenue.....	1
New catch-basins, West Roxbury .....	Day labor.....	.....	.....	.....	49 36	70 41	120 36	Hyde Park avenue.....	1
New catch-basins, West Roxbury .....	Day labor.....	.....	.....	.....	107 55	111 62	219 17	Meehan street.....	2
New catch-basins, Dorchester.....	Day labor.....	.....	.....	.....	\$510 80	\$465 63	\$1,110 41	.....	7
New catch-basins, Dorchester.....	Day labor.....	\$133 98	.....	.....	.....	.....	.....	.....	.....
New catch-basins, Dorchester.....	Day labor.....	.....	.....	.....	\$91 27	\$83 91	\$15 28	Corbet street.....	1
New catch-basins, Dorchester.....	Day labor.....	.....	.....	.....	.....	.....	175 18	Westcott street.....	1
New catch-basins, Dorchester.....	Day labor.....	.....	.....	.....	69 47	*97 06	97 06	Greenwood street.....	7
New catch-basins, Dorchester.....	Day labor.....	.....	.....	.....	.....	*45 23	736 70	.....	8
New catch-basins, Roxbury.....	Day labor.....	\$15 28	.....	.....	\$782 74	\$226 20	\$1,024 22	Deaconess road.....	1
New catch-basins, Roxbury.....	Day labor.....	.....	.....	.....	.....	.....	122 41	Edgar street.....	2
New catch-basins, Roxbury.....	Day labor.....	.....	.....	.....	842 40	\$80 01	196 30	Parker street.....	1
New catch-basins, Roxbury.....	Day labor.....	.....	.....	.....	67 63	128 67	122 87	.....	4
					50 01	72 86			
					\$160 04	\$281 54	\$441 58		
					\$1,634 29	\$1,173 30	\$2,956 85		
									23

\* Not complete.

† See sewerage works.

## New Catch-basins Paid for, February 1, 1910, to January 31, 1911. (Included in Other Sewer Construction.)

DISTRICT.	Built by	BUILT IN 1909.	CONTRACTS.		DAY LABOR.		Total Expendi- ture.	Location.	Number of basins Built each.
		Materials, etc.	Con- tractor.	Material and Teaming.	Labor.	Material and Teaming.			
New catch-basins, Brighton.....	A. Cefalo.....	\$139 00	\$40 20	.....	.....	.....	\$179 20	Commonwealth and Chestnut Hill ave.	2
New catch-basins, Brighton.....	McCarthy & Walsh.....	142 00	40 20	.....	.....	.....	182 20	Corey road.....	2
New catch-basins, Brighton.....	A. Cefalo.....	130 75	36 56	.....	.....	.....	167 31	Dighton street.....	2
New catch-basins, Brighton.....	G. J. Regan.....	219 50	.....	.....	.....	.....	*219 50	Quint avenue.....	4
New catch-basins, West Roxbury... West Roxbury Trap Rock Company.	A. Cefalo.....	\$631 25	\$116 96	.....	.....	.....	\$748 21	.....	10
New catch-basins, West Roxbury... West Roxbury Trap Rock Company.	West Roxbury Trap Rock Company..	\$235 25	\$80 40	.....	.....	.....	\$315 65	Ainsworth street.....	4
New catch-basins, West Roxbury... Day labor.	Day labor.	705 00	218 80	.....	.....	.....	923 80	Hyde Park avenue...	12
New catch-basins, West Roxbury... C. R. Gow Company..	C. R. Gow Company..	64 10	10 88	.....	.....	.....	74 98	Roslindale branch Stony brook.	1
New catch-basins, West Roxbury... T. J. Young Company.....	T. J. Young Company.....	66 90	18 28	.....	.....	.....	85 18	Washington street, Williams street to Green street.	1
\$1,071 25	\$328 36	\$153 74	\$199 35	\$1,752 70					21
New catch-basins, Dorchester.....	Day labor.....	.....	\$45 23	\$52 90	\$98 13				1
New catch-basins, Dorchester.....	Day labor.....	.....	75 45	32 47	*107 92				1

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\* Not complete.

### *Recapitulation.*

23 catch-basins.  
58 catch-basins in  
—

Paid.	\$2,956	85
	4,946	71
	<hr/>	
	<b>\$7,903</b>	56

## Abolishment of Grade Crossings.

LOCATION.	Built by	Labor.	Teaming.	Materials.	Miscel- laneous.	Inspec- tion.	Stock.	Totals.	Remarks.
Elm street, Dorchester.....	Day labor....	\$128 08	\$25 90	\$107 34	.....	.....	.....	\$261 32	2 new catch-basins,
Taylor and Franklin streets, Dorchester.....	Day labor....	118 64	14 08	49 56	\$0 48	.....	.....	182 76	Connecting sewers.
New way from Walnut street, 215 feet northeast, Dorchester.	Day labor....	770 42	37 15	210 67	.....	.....	.....	1,018 24	Surface drain, includ- ing 2 basins.
Freeport street, Dorchester.....	Railroad.....	.....	.....	.....	.....	\$59 50	.....	59 50	
Adams and Park streets, Dorchester.....	Railroad.....	.....	.....	.....	.....	63 00	.....	63 00	
Pope's Hill street, Dorchester .....	Railroad.....	.....	.....	.....	.....	24 50	.....	24 50	
New way, Dorchester.....	Railroad.....	.....	.....	.....	.....	189 00	.....	189 00	
Freeport and other streets, as above.....	.....	.....	.....	.....	.....	.....	\$77 00	77 00	
Totals.....	.....	\$1,017 14	\$77 13	\$367 57	\$0 48	\$336 00	\$77 00	\$1,875 32	

## Catch-basins Built, 1910-11.

DISTRICT.	Contract.	Day Labor.	REBUILT.	
			Contract.	Day Labor.
City proper.....	.....	5	.....	*1
Roxbury.....	.....	26	.....	1
Dorchester.....	29	65	.....	†3
West Roxbury.....	17	18	.....	.....
Brighton.....	8	8	.....	.....
Charlestown.....	.....	.....	.....	.....
East Boston.....	.....	21	.....	.....
South Boston.....	.....	9	.....	.....
Totals.....	54	152	.....	5

Total catch-basins built, 211.

\* Paid Boston Elevated Railway Company.

† One paid Boston Elevated Railway Company.

## ENTRANCE FEES, PERMITS AND ASSESSMENTS.

Entrance fees to the amount of \$5,124.40 have been deposited with the City Collector for collection from estates upon which no sewer assessment was ever paid, in accordance with the Ordinances of 1908, chapter 3, section 11.

Bills for sewer assessments amounting to \$934.62 have been deposited for collection, representing those estates assessed under chapter 456 of the Acts of 1889 and amendments thereto, which have been connected during the year with the sewers for which they were assessed.

Three thousand two hundred and forty-six permits have been issued, viz.: 679 to district foremen, 135 to contractors and 2,432 to licensed drain layers, for repairing or laying house drains. The work done under these permits has been inspected and a record of the same made on the plans of this division, in accordance with the provisions of the Ordinances of 1908, chapter 3.

Plans for the assessment of estates for sewer construction have been furnished the Street Commissioners, representing 31,311 feet of sewers and appurtenances, costing \$162,774.

## RATES PAID FOR HIRED MACHINERY.

Bull wheel derrick and engine . . . . .	\$150 00 per month.
Pumping engine . . . . .	3 00 per day.
Carson trench machine, complete . . . . .	170 00 per month.
Carson trench machine, without engine . . . . .	125 00 per month.
Eight-inch centrifugal pump . . . . .	2 00 per day.
Pulsometer . . . . .	2 00 per day.
Electric motor . . . . .	1 00 per month. per horse power

## Cost of Maintaining all Horses in the Sewer Division, February 1, 1910, to January 31, 1911.

ITEMS.	Total Cost.	50 Horses, Average Cost per Day.
Labor.....	\$12,077 82	\$0 66
Hay and grain.....	8,061 59	44
Shoeing.....	1,430 88	.078
Veterinary services and medicine.....	599 08	.03
Stable goods.....	213 01	.01
Totals .....	\$22,382 38	\$1 226

## Summary of Sewer Construction for the Year Ending January 31, 1911.

DISTRICT.	Built by the City by Contract or Day Labor.	Built by Private Parties.	Total Length Built.
	Linear Feet.	Linear Feet.	Linear Feet,
City proper.....	4,772.36	6,129.60	10,901.96
East Boston.....	5,896.45	.....	5,896.45
Charlestown.....	.....	.....	.....
South Boston.....	1,139.54	162.82	1,302.36
Roxbury.....	22,728.29	705.36	23,433.65
West Roxbury.....	30,182.43	2,433.78	32,616.21
Dorchester.....	36,657.64	4,368.85	41,026.49
Brighton.....	13,354.39	3,251.21	16,605.60
Totals .....	114,731.10	17,051.62	131,782.72

STREET DEPARTMENT — SEWER DIVISION. 399

Summary of Sewer Construction for Five Years Previous to February 1, 1911.

	1906.	1907.	1908.	1909.	1910.
Built by the city by contract or day labor.....	Linear Feet. 103,823.72	Linear Feet. 79,340.46	Linear Feet. 53,803.78	Linear Feet. 101,073.47	Linear Feet. 114,731.10
Built by private parties.....	9,641.49	11,590.87	7,744.30	11,606.97	17,051.62
Totals.....	113,465.21	90,931.33	61,548.08	112,680.44	131,782.72

Schedule of Sewers Built to Date in the City of Boston, February 1, 1911.

DISTRICT.	Length of Sewers Built During the Year Ending January 31, 1911.	Length of Sewers Re-built or Abandoned During the Year Ending January 31, 1911.	Additional Length of Sewers for the Year Ending January 31, 1911.	
	Linear Feet.	Linear Feet.	Linear Feet.	Miles.
City proper.....	10,901.96	1,803.12	9,098.84	1.72
East Boston.....	5,896.45	.....	5,896.45	1.12
Charlestown.....	.....	.....	.....	.....
South Boston.....	1,302.36	206.45	1,095.91	0.21
Roxbury.....	23,433.65	3,481.18	19,952.47	3.78
West Roxbury.....	32,616.21	637.85	31,978.36	6.06
Dorchester.....	41,026.49	1,857.89	39,168.60	7.42
Brighton.....	16,605.60	209.29	16,396.31	3.11
Totals.....	131,782.72	8,195.78	123,586.94	23.42
Total length built previous to January 31, 1910.....	.....	.....	.....	734.72
Length of common sewers.....	.....	.....	.....	758.14
Length of metropolitan intercepting sewers.....	.....	.....	.....	6.81
Length of intercepting sewers.....	.....	.....	.....	24.12
Total.....	.....	.....	.....	789.07
Total mileage of streets containing sewerage works .....	.....	.....	.....	489.93

**Table of Approximate Quantities, Lifts and Duties at Calf Pasture Pumping Station, 1910-11.**

MONTH.	Total Pumpage. Gallons.	Average per Day. Gallons.	Minimum Day. Gallons.	Maximum Day. Gallons.	Average Lift. Feet.	Average Duty, Foot-Pounds, per 100 Pounds of Coal.
<b>1910.</b>						
February.....	3,007,240,000	107,401,000	91,821,000	139,643,000	37.2	91,210,000
March.....	2,922,915,000	94,288,000	79,918,000	143,197,000	37.6	91,215,000
April.....	2,697,436,000	89,915,000	71,550,000	120,171,000	37.7	95,120,000
May.....	2,463,131,000	79,456,000	66,638,000	100,676,000	38.0	96,168,000
June.....	2,804,858,000	93,495,000	67,225,000	136,250,000	38.1	94,771,000
July.....	2,474,077,000	79,809,000	68,612,000	95,263,000	38.1	100,414,000
August.....	2,465,257,000	79,524,000	70,079,000	97,506,000	38.4	101,607,000
September.....	2,402,097,000	80,070,000	66,513,000	100,576,000	38.3	97,560,000
October.....	2,492,827,000	80,414,000	63,057,000	99,269,000	38.4	96,601,000
November.....	2,568,074,000	85,602,000	68,720,000	129,696,000	38.4	92,175,000
December.....	2,637,530,000	85,082,000	65,423,000	116,687,000	38.8	91,788,000
<b>1911.</b>						
January.....	2,803,064,000	90,421,000	74,862,000	111,678,000	39.3	93,498,000
Total.....	31,738,506,000					
Averages.....		87,123,000	71,202,000	115,884,000	38.2	*94,736,000

\* Average from yearly quantities.  
Records from plunger displacement.  
Average slip for the year about 12 per cent.

### CALF PASTURE PUMPING STATION.

This plant contains the following sewage pumping units:

One vertical, beam and fly-wheel, triple expansion engine of the Leavitt type; cylinders,  $18\frac{1}{2}$  inches, 33 inches,  $52\frac{3}{4}$  inches in diameter; two single acting pump plungers, each 60 inches in diameter and 120-inch stroke; capacity, 72,000,000 gallons in twenty-four hours with 40-foot lift.

Two vertical, beam and fly-wheel, compound engines of the Leavitt type; cylinders,  $25\frac{1}{2}$  inches, 52 inches in diameter; two single acting pump plungers, each 48 inches in diameter and 108-inch stroke; capacity of each engine, 35,000,000 gallons in twenty-four hours with 40-foot lift.

Two horizontal, duplex, tandem-compound engines of the Worthington type; cylinders, 21 inches, 36 inches in diameter; two double acting pump plungers, 45 inches in diameter and 48-inch stroke; capacity of each engine, 25,000,000 gallons in twenty-four hours with 40-foot lift.

A contract has been made for two steam turbine centrifugal pumps of 56,000,000 gallons capacity each in twenty-four hours with a 40-foot lift. These pumps are to take the place of the two Worthington pumps, which are worn beyond repair after twenty-seven years of service.

The following are the principal additions, alterations and repairs made during the past year at the Calf Pasture pumping station:

At the gate house the cages have been supplied with new chains, counterbalance rods and links and new cast-iron guards at lower ends of south cage guides.

A new gallery has been erected under the floor, consisting of new cast-iron brackets, channel iron, platform and hand rail; and the new main sluice gate, purchased last year, has been put in place in the south sewer.

The side walls and outer pier in main sewer have been raised with concrete 2 feet in order to extend stop planks higher.

A new floor has been laid in the stable and the outside of the building painted.

In the main building a new inside stuffing box has been put in No. 1 pump and a new composition sleeve on plunger rod of No. 2 pump.

A new connection has been made on steam line of No. 1 and No. 2 into low pressure line in engine room in preparation for removal of old line.

No. 1 pump has been removed in preparation for new unit.

Old main steam header for No. 3 and No. 4 pumps has been replaced with new one.

Main bearing of No. 4 engine has been rebabbited.

A new 5-inch injection valve was put in line to No. 4 condenser.

A new composition cone and nozzle was put in condenser of No. 5 engine.

A new composition float was made for tell-tale in No. 5 pump well.

The crank-pin box of No. 1 dynamo engine was

rebabbited and new valve stems with metallic packing put in both No. 1 and No. 2.

The commutator of No. 2 was trued up by turning in place.

A new 9-inch steel tee and 12-inch cross have been put in main steam line, and a reducing valve in heating line with a pop safety valve to protect heating system from overpressure.

A new set of valves was put in No. 1 feed pump, the old set refaced and put into No. 2, leaving a spare set refaced at hand.

New relief valves have been put in feed lines and governor valves in steam lines to the oil pumps.

The centrifugal injection pumps have been connected up to steam, exhaust and water piping.

The boiler pop valves have been reground and set at pressure carried and the main stops reground and one new one put in.

Galleries have been placed under upper windows on both sides of engine room and a cabinet built inclosing the main switch board of pump well gate motors.

The old temporary boiler house has been raised and the ground filled in and graded.

The coal run has been replanked and sheathed and two new coal cars put in service, replacing worn-out cars.

All gates in pipe chamber have been renewed and four spare ones made.

New poles have been set in concrete along the foot of deposit sewer embankment and new wiring put on same.

The west shaft house has been repointed inside and out, new gutters put on and two ventilators put in roof.

The sludge scow has been rebuilt according to specifications of survey and a  $2\frac{1}{2}$ -inch Edson pump installed aboard.

New scraper chains have been placed in deposit sewer, a new idler sheave, shaft and guides in north deposit sewer, and a patch put in furnace of boiler operating the carrier gear.

One hundred and eighteen loads of sand were removed from No. 1 pump well after the removal of pump No. 1.

## MOON ISLAND.

At Moon Island it has become necessary to renew the twenty gates in the six-foot gallery which are used to control the flow and discharge of the sewage. These gates have been worn out by twenty-seven years of service and are being replaced by gates operated by compressed air. Ten were contracted for and delivered and five of them have been installed, two upper and three lower, at basin No. 1 of the reservoir.

A new hot water heating system for the gatehouse has been installed.

## COST OF PUMPING.

Average cost per million foot-gallons for pumping:

Volume (31,738.5 million gallons) by (= times) lift (38.2 feet) = 1,212,411 million foot-gallons for the year.

Labor cost included in the totals is based upon the following force of fifty-one men:

One superintendent, one clerk, one storekeeper, one oil man, one electrician, one carpenter, one blacksmith, two machinists, six laborers and four "engineers' watches," each including nine men.

Cost of city water not included.

ITEMS.	Cost.	Cost per Million Foot-Gallons.
Labor.....	\$51,016 98	\$0 04208
Coal.....	17,117 63	01412
Oil and waste.....	1,624 05	00134
Rubber valves and packing.....	2,462 21	00203
Miscellaneous supplies and renewals.....	6,061 81	00500
Totals.....	\$78,282 68	\$0 06457
Labor at screens.....		\$0 00335

## MAIN DRAINAGE YARD.

Number of gates, regulators, sumps and overflows to be cleaned and cared for. These are under constant

inspection and are cleaned after every storm or heavy rise of sewage due to other causes:

DISTRICT.	Gates.	Regulators.	Sumps.	Overflows.
Brighton.....	42	15	17	23
Charlestown.....	24	9	11	12
East Boston.....	47	18	19	26
City proper.....	88	15	41	42
Dorchester.....	62	2	11	18
South Boston.....	49	4	25	21
Roxbury.....	43	.....	11	20

Number of penstock and flushing gates.....	19
Regulators repaired.....	40
Tide gates repaired.....	175
Manholes repaired.....	81
Manhole steps put in.....	50
Tide gates cleaned.....	6,321
Regulators cleaned.....	2,750
Overflows cleaned.....	220
Sumps cleaned.....	2,900
Penstock and flushing gates cleaned, oiled and repaired.....	35

#### Average Daily Amount of Sewage Received at Moon Island Reservoir.

	Gallons.
1906 .....	80,241,046
1907 .....	87,661,058
1908 .....	83,376,502
1909 .....	82,378,000
1910 .....	74,432,000

#### Amount of Sludge Received and Removed from Deposit Sewers from February 1, 1910, to January 31, 1911, Inclusive.

MONTH.	Cubic Yards Received.	Cubic Yards Removed.	
1910.			
February.....	189	255	Sludge in sewers February 1, 1910, 2,491 cubic yards.
March.....	322	225	
April.....	552	525	
May.....	792	525	
June.....	766	675	
July.....	407	675	
August.....	296	525	
September.....	617	525	
October.....	223	300	
November.....	388	225	
December.....	409	150	
1911.			
January.....	485	320	Sludge in sewers February 1, 1911, 3,012 cubic yards.
Totals.....	5,446	4,925	

Table Showing Cost of Cleaning Sewers by Contract, 1910-11.

LOCATION.	Contractor.	Length and Sizes.	Cubic Yards Removed.	Estimated Cost to Contractor per Foot.	Contractor's Bid per Foot.	Estimated Cost to Contractor.	Amount Paid Contractor.	Remarks.
Poplar street.....	R. A. Nagle.....	2,165.14 ft. 15 in., pipe, to 24 in. by 36 in., brick.	.25	.80 183	.80 105	\$397 75	\$227 34	Hard gravel.
Chadwick street.....	R. A. Nagle.....	906.7 ft. 30 in. by 12 in., brick, and 12 in. and 18 in., pipe.	.9	.144	.11	131 10	99 74	Bad sewer.
St. Stephens street.....	R. A. Nagle.....	1,218.77 ft. 30 in. and 24 in., brick,	.30	.443	.11	540 00	134 06	
Florence street.....	R. A. Nagle.....	1,748.64 ft. 12 in., pipe, to 2 ft. by 3 ft. 8 in., brick.	.26	.14	.095	245 50	166 08	Gravel and cement.
Ashland street.....	James L. Pierce & Co. ....	990 ft. 15 in., pipe, to 20 in. by 26 in., brick.	.9	.095	.16	94 50	161 08	
Portland street.....	James L. Pierce & Co. ....	850 ft. 3 ft. 6 in., brick and iron pipe.	.26	.583	1.31	496 00	1,125 29	Grease and high water.
Talbot avenue.....	James L. Pierce & Co. ....	2,372.73 ft. 30 in. by 32 in., brick....	.42	.152	.145	352 00	344 05	
Commercial street.....	James L. Pierce & Co. ....	581 ft. 2 ft. 4 in. by 3 ft. 6 in., brick,	.18	.22	.325	128 00	188 83	
Prince street.....	James L. Pierce & Co. ....	347 ft. 15 in., pipe, to 30 in. by 36 in., brick,	.9	.263	.24	91 50	83 28	
Harrison street.....	R. A. Nagle.....	674 ft. 12 in., pipe.....	.6	.15	.32	101 00	183 68	
Brook street.....	James L. Pierce & Co. ....	364.79 ft. 12 in., pipe.....	.1	.154	.23	56 26	83 90	
Beverly street.....	James L. Pierce & Co. ....	333 ft. 3 ft. by 3 ft., wood.....	.27	.575	.49	191 60	241 88	\$78.91 extra for recleaning break.
Marion street.....	James L. Pierce & Co. ....	413 ft. 12 in., pipe.....	.8	.272	.24	112 50	99 12	Hard to rod.
Market and Canal streets.....	James L. Pierce & Co. ....	754 ft. 3 ft. 6 in., brick, to 4 ft. 6 in., brick.	.20	.205	.54	155 25	407 16	
Canal street relief sewer.....	James L. Pierce & Co. ....	1,501.5 ft. 4 ft. 9 in. by 5 ft., brick,	.89	.421	.50	632 51	750 75	
Canterbury branch, Stony brook	James L. Pierce & Co. ....	1,788 ft. 10 ft. by 8 ft. 6 in., brick..	.190	.483	.69	965 00	1,233 72	Small outlet and rain.
Publie Alley No. 444.....	James L. Pierce & Co. ....	545.9 ft. 12 in., pipe.....	1.5	.093	.32	51 00	174 69	Badly stanked.
Blossom street.....	James L. Pierce & Co. ....	399.55 ft. 20 in. by 24 in., brick....	.11	.48	1.06	153 00	423 52	Old brickwork left in — and settlement.





**Amount of Refuse Removed from Gatehouse from February 1,  
1910, to January 31, 1911, Inclusive.**

MONTH.	Pounds.
<b>1910.</b>	
February.....	65,250
March.....	79,650
April.....	81,000
May.....	79,875
June.....	66,825
July.....	80,100
August.....	83,475
September.....	87,975
October.....	87,075
November.....	69,525
December.....	71,325
<b>1911</b>	
January.....	67,150
	<b>919,225 = 459 <math>\frac{1225}{2000}</math> tons.</b>

Coal used in crematory =  $44 \frac{1315}{2240}$  tons.

**Real Estate in Charge of the Sewer Division.**

	ASSESSED VALUATION.	
	Land.	Buildings.
<b>OWNED BY CITY.</b>		
Sewer yard, 678 Albany street, South End.....	\$56,400	\$3,000
Sewer yard, Massachusetts avenue, near Albany street, South End.....	8,900	1,100
Sewer yard, Western avenue, Brighton.....	9,200	5,500
Pumping station, Old Harbor Point, Dorchester.....	138,000	700,000
Land, buildings and reservoirs at Moon Island and Squamtum.....		
Sewer yard, Child and South streets, West Roxbury (occupied in common with Highway Division).....	19,300	3,500
Pumping station, Lyons street. (Land).....	1,200	
Gatehouse, Back Bay Fens.....		
Sewer yard, Boylston and Hereford streets. (Occupied in common with the Highway Division).....	86,900	600
<b>LEASED.</b>		
Sewer yard, East Eagle street, East Boston. (Part of rental paid by this division. Leased from trustees of Glendon Company).....	64,000	8,300
Sewer yard, Old Harbor street and Columbia road, South Boston. (Office building owned by Sewer Division. Rented from Mary Creed).....	5,200	3,200
Sewer yard, Gibson street, Dorchester. (Buildings erected by Sewer Division. Leased from trustees of Gibson School Fund).....	7,000	5,000

## Sewer Contracts Awarded During 1910-11.

CONTRACT.	Awarded to	Dated.	Price per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.	
Talbot, Southern and Hopetill avenues, Whitfield, Norfolk and Washington streets and Melville road, Dorchester.	William L. Dolan* ..... (7 bidders.)	April 30, 1910.	288 linear feet, more or less, of earth excavation and refill for 3-foot 6-inch circular concrete surface drain, above grade, at \$2.30 linear foot. 312 linear feet, more or less, of earth excavation and refill for 3-foot circular concrete surface drain, above grade, at \$2.20 linear foot. 623 linear feet, more or less, of earth excavation, and refill for 2-foot combination concrete and channel-pipe surface drain, above grade, at \$2 linear foot. 187 linear feet, more or less, of earth excavation and refill for 20-inch combination concrete and channel-pipe surface drain, above grade, at \$1.80 linear foot. 50 cubic yards, more or less, of earth excavation below grade, other than for underdrain, at 40c. cubic yard. 50 cubic yards, more or less, earth excavation, outside trenches, at 40c. cubic yard. 100 cubic yards, more or less, of rock excavation, at \$3 cubic yard. 40,000 feet, board measure, more or less, spruce sheeting, at 15c. M. feet. 2,000 feet, board measure, more or less, spruce platforms, etc., at \$1 M. feet. 50 cubic yards, more or less, of gravel refill, at 25c. cubic yard. 1,500 linear feet, more or less 6-inch pipe under-drain furnished and laid, at 1c. linear foot. 200 linear feet, more or less, 8-inch pipe under-drain, furnished and laid, at 1c. linear foot. 200 cubic yards, more or less, of concrete, furnished and placed for 3-foot 6-inch and 3-foot circular concrete surface drains, at \$6.90 cubic yard.	\$12,635.89 Including extra work amounting to \$178.50.	\$15,536.50	

Lowest bidder, M. Russo and Porcielli, \$9,977.20.  
Second lowest bidder, Thomas H. Connolly, \$12,100.65.  
Third lowest bidder, William L. Dolan, \$13,021.35.  
Contract awarded to William L. Dolan.

165 cubic yards, more or less, of concrete, including 617 linear feet, more or less, of 24-inch channel pipe, furnished and placed for 2-foot combined concrete and channel-pipe surface drain, at \$7.90 cubic yard, 40 cubic yards, more or less, of concrete, including 182 linear feet, more or less, of 20-inch channel pipe, furnished and placed for 20-inch combination concrete and channel-pipe surface drain, at \$7.90 cubic yard, 890 linear feet, more or less, 18-inch pipe, furnished and laid for surface drains, at \$1.37 linear foot.
1,333 linear feet, more or less, 15-inch pipe, furnished and laid for surface drains, at \$1.30 linear foot.
755 linear feet, more or less, 12-inch pipe, furnished and laid for surface drain, at \$1 linear foot.
640 linear feet, more or less, 10-inch pipe, furnished and laid for surface drain, at \$1 linear foot.
50 linear feet, more or less, 10-inch pipe furnished and laid for catch-basin drains, at 45c. linear foot.
77, more or less, pipe connections, placed in new concrete or combined concrete and channel-pipe surface drains, at 45c. each.
100 linear feet, more or less, of old house drain, rebuilt and reconnected, at 45c. linear foot.
100 linear feet, more or less, of old catch-basin drains rebuilt and reconnected, at 45c. linear foot.
20 linear feet, more or less, of old drain rebuilt, other than house and catch-basin drain, at 45c. linear foot.
8 manholes, more or less, built on concrete and combined concrete and channel-pipe surface drain, at \$40 each.
19 manholes, more or less, built on pipe surface drains, at \$33 each.
Taking up and removing 690 linear feet, more or less, of existing 24-inch pipe surface drain, at 15c. linear foot.

\* The contractor to furnish all the materials except the ironwork and cut stone.

## Sewer Contracts Awarded During 1910-11.—Continued.

Contract.	Awarded to	Dated.	Price per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Talbot, Southern and Hopstill avenues, Whitfield, Norfolk and Washington streets and Melville road, Dorchester.	William L. Dolan* (7 bidders.)	April 30, 1910.	Taking down and removing 3 old manholes on existing 24-inch pipe surface drain, at \$3 each. 1,450 square yards, more or less, of old stone block pavement and flagstones, removed and deposited as directed, at 10c. square yard. 2, more or less, connections between old pipe surface drains and new concrete or combined concrete and channel-pipe surface drain, at \$2 each.	\$27,039.56 Including extra work amounting to \$28.64.	\$28,376.15
Tremont and Cunard streets, Roxbury.	Antony Cefalo* (9 bidders.)	May 6, 1910.	1,130 linear feet, more or less, of earth excavation and refill for 5-foot, 2-inch by 4-foot 9-inch concrete surface drain, above grade, together with attached and depressed pipe sewers and manholes at \$6.50 linear foot. 212 linear feet, more or less, of earth excavation and refill for 3-foot, 4-inch circular concrete surface drain, above grade, together with attached and depressed pipe sewer, manholes and house connections at \$5 linear foot. 15 linear feet, more or less, of earth excavation and refill for 3-foot, 2-inch by 2-foot 10-inch concrete surface drain, above grade, together with attached and depressed sewer and manholes at \$4 linear foot. 25 linear feet, more or less, of earth excavation and refill for double 36-inch circular concrete and iron pipe surface drains, above grade, together with attached and depressed 18-inch pipe sewer at \$5 linear foot. 250 cubic yards, more or less, of earth excavation, below grade, for purposes other than for underdrain or pump wells, at \$2.50 cubic yard.		4

40 cubic yards, more or less, of earth excavation, above grade, outside trenches, at \$1.75 cubic yard.	
3 cubic yards, more or less, of rock excavation at \$7 cubic yard.	
88,000 feet, board measure, more or less, spruce sheathing at \$25 M. feet.	
9,000 feet, board measure, more or less, spruce platforms, etc., at \$35 M. feet.	
15 cubic yards, more or less, gravel for refilling at \$1.75 cubic yard.	
1,000 linear feet, more or less, 6-inch pipe, furnished and laid for underdrain, at 25c. linear foot.	
700 linear feet, more or less, 8-inch pipe, furnished and laid for underdrain, at 35c. linear foot.	
600 linear feet, more or less, 10-inch pipe, furnished and laid for underdrain, at 60c. linear foot.	
1,200 cubic yards, more or less, Class A concrete, furnished and placed, at \$7 cubic yard, 100 cubic yards, more or less, Class B concrete, furnished and placed, at \$6.50 cubic yard.	
45 cubic yards, more or less, Class C concrete, furnished and placed, at \$6 enbhc yard, 532 linear feet, more or less, 10-inch pipe, furnished and laid in separate trench for sewers, including excavation and refill, and not less than 26 Y's, at \$1.50 linear foot.	
360 linear feet, more or less, 12-inch pipe, furnished and laid in separate trench for sewers, including excavation and refill, and not less than 18 Y's, at \$1.50 linear foot.	
214 linear feet, more or less, 10-inch pipe, furnished and laid for sewers in main trench, attached to surface drain above or below, and including not less than 11 Y's, at 50c. linear foot.	
600 linear feet, more or less, 12-inch pipe, furnished and laid for sewers in main trench, attached to surface drain above or below, and including not less than 30 Y's, at 50c. linear foot.	

\* The contractor to furnish all the materials except the ironwork and cut stone.

## Sewer Contracts Awarded During 1910-11.—Continued.

CONTRACT.	Awarded to	Dated.	Price per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Tremont* and Cunard streets, Roxbury. ....	Antony Cefalo*..... (9 bidders.)	May 6, 1910.	<p>317 linear feet, more or less, 15-inch pipe, furnished and laid for sewers in main trench, attached to surface drain above or below, and including not less than 15 Y's, at 60c. linear foot.</p> <p>239 linear feet, more or less, 18-inch pipe, furnished and laid for sewers in main trench, attached to surface drain above or below, and including not less than 24 Y's, at 75c. linear foot.</p> <p>40 linear feet, more or less, 6-inch pipe, furnished and laid for new house drains, including all necessary bends, Y's, etc., at \$1 linear foot.</p> <p>Removing and relaying 324 linear feet, more or less, of 4-inch and 6-inch old house drains, inside or outside of main trench, including all necessary bends, Y's, etc., at 75c. linear foot.</p> <p>Removing and relaying 30 linear feet, more or less of 8-inch and 10-inch old house drains, inside or outside of main trench, including all necessary bends, Y's, etc., at \$1 linear foot.</p> <p>50 linear feet, more or less, 10-inch pipe, furnished and laid for catch-basin drains, including excavation and refill, removal of old pipe, etc., at \$1 linear foot.</p> <p>20 linear feet, more or less, 10-inch, 12-inch and 15-inch pipe surface drain, furnished and laid in short lengths at street intersections, inside or outside of main trench, etc., at \$1 linear foot.</p> <p>110, more or less, pipe connections, 6 inches to 15 inches diameter, 2 feet long, furnished and placed in new concrete surface drains, at 75c. each.</p>		

Allen street, between Amawan avenue and Pelton street, and Pelton street, between Allen and Stratford streets, West Roxbury.	Edward J. Hayden* . . . . . (5 bidders.)	May 28, 1910.	\$1,227 67 \$1,655 30	7 manholes, more or less, built on concrete surface drains, at \$67 each. 14 manholes, more or less, built on pipe sewers, at \$50 each. 5 cubic yards, more or less, of brick masonry, at \$15 cubic yard. 4, more or less, connections made with old intercepting sewers, including necessary rebuilding of old walls, inverters, etc., at \$10 each. 3, more or less, connections made between surface drains and old sewers or manholes, including rebuilding of old walls, inverters, etc., at \$10 each.
				5 cubic yards, more or less, earth excavation, \$1.25 cubic yard, below grade, other than for underdrain, at \$1.25 cubic yard. 10 cubic yards, more or less, earth excavation in outside trenches, at 75c. cubic yard. 40 cubic yards, more or less, rock excavation at \$6 cubic yard. 3,000 feet, board measure, more or less, spruce sheeting at \$20 M. feet. 3 cubic yards, more or less, concrete at \$6 cubic yard. 536 linear feet, more or less, 10-inch pipe furnished and laid at \$1.35 linear foot. 275 linear feet, more or less, 8-inch pipe furnished and laid at 97c. linear foot. 84 linear feet, more or less, 6-inch pipe furnished and laid for chimneys at 15c. linear foot. 350 linear feet, more or less, of existing house sewer or drain, including manholes removed at 10c. linear foot. 30 linear feet, more or less, of old house drain rebuilt at 30c. linear foot. For each linear foot of old drain rebuilt other than house and catch-basin drain \$1.50 linear foot. 4 manholes, more or less, built on house sewer at \$45 each.

\* The contractor to furnish all the materials except the ironwork and cut stone.

## Sewer Contracts Awarded During 1910-11.—Continued.

CONTRACT.	Awarded to	Dated.	Price per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Allen street, between Anawan avenue and Pelton street, and Peiton street, between Allen and Stratford streets, West Roxbury.	Edward J. Hayden*..... (5 bidders.)	May 28, 1910.	5 cubic yards, more or less, gravel refill at \$1 cubic yard. 100 linear feet, more or less, 6-inch pipe furnished and laid for underdrain at 15c. linear foot. 1 or more old inverters in manhole rebuilt and connected with new sewer or drain at \$5 each.	\$1,078 56	\$779 25
Johnston road, from Harvard street 510 feet easterly, Dorchester.	E. F. Kennelly*..... (5 bidders.)	May 28, 1910.	2 cubic yards, more or less, earth excavation below grade, other than for underdrain at \$1 cubic yard. 5 cubic yards, more or less, earth excavation, outside trenches at 75c. cubic yard. 20 cubic yards, more or less, rock at \$4 cubic yard. 5 cubic yards, more or less, gravel refill at \$1 cubic yard. 1,000 feet, board measure, more or less, spruce sheeting at \$1 M. foot. 1,000 feet, board measure, more or less, spruce platforms, etc., at \$15 M. feet. 100 linear feet, more or less, 6-inch pipe laid for underdrain at 50c. linear foot. 2 cubic yards, more or less, concrete at \$6 cubic yard. 500 linear feet, more or less, 8-inch pipe laid, including excavation and refill, at 90c. linear foot. 20 linear feet, more or less, 6-inch pipe laid for house drains, including excavation and refill, at 50c. linear foot. 200 linear feet, more or less, of existing 8-inch pipe house drain, including manhole removed in main trench, at 20c. linear foot. 10 linear feet, more or less, house drain laid at 50c. linear foot.	\$1,078 56	\$779 25

			\$45,459 60
Roslindale Branch of Stony brook in location N. Y. N. H. & H. R. R. from northwest of Aldrich street, to 150 feet west of Anawan avenue, West Roxbury.	Charles R. Gow Company* . . . (9 bidders.)	May 28, 1910	<p>10 linear feet, more or less, of existing drain re-laid, other than house drain at 50c. linear foot. 2 manholes, more or less, at \$35 each. For furnishing earthenware pipe estimated value of three hundred fifty dollars (\$350) — 64 per cent discount from standard list prices.</p> <p>Final payment not made.</p> <p>1,470 linear feet, more or less, earth excavation and refill for 7-foot circular concrete conduit above grade at \$8 linear foot. 430 linear feet, more or less, earth excavation and refill for 5-foot 9-inch circular concrete conduit above grade at \$7 linear foot. 14 linear feet, more or less, earth excavation and refill for 5-foot circular concrete conduit above grade at \$6 linear foot. 89 linear feet, more or less, earth excavation and refill for 3-foot 3-inch circular concrete conduit above grade at \$7 linear foot. 50 cubic yards, more or less, earth excavation below grade other than for underdrain or pump wells, at \$2 cubic yard. 50 cubic yards, more or less, earth excavation in outside trenches at \$1.25 cubic yard. 1,000 cubic yards, more or less, rock at \$2 cubic yard. 90,000 feet, board measure, more or less, spruce sheeting at \$10 M. feet. 2,000 feet, board measure, more or less, spruce platforms, etc., at \$30 M. feet. 100 cubic yards, more or less, gravel refill at \$1.50 cubic yard. For laying 500 linear feet, more or less, 6-inch pipe underdrain at 25c. linear foot. For laying 500 linear feet, more or less, 8-inch pipe underdrain at 30c. linear foot. For laying 500 linear feet, more or less, 10-inch pipe underdrain at 35c. linear foot. For laying 400 linear feet, more or less, 12-inch pipe underdrain at 50c. linear foot.</p>
			* The contractor to furnish all the materials except the ironwork and cut stone.

## Sewer Contracts Awarded During 1910-11.—Continued.

CONTRACT.	Awarded to	Dated.	Price per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Roslindale Branch of Stony brook in location N.Y., N.H. & H.R. from northwest of Aldrich street to 150 feet west of Arawan avenue, West Roxbury.	Charles R. Gow Company* . . . (9 bidders.)	May 28, 1910.	188 linear feet, more or less, of old 15-inch pipe removed and relaid, including laying one 12 feet in length of 16-inch cast-iron pipe at \$4 linear foot. For laying one 12-foot length of 12-inch cast-iron pipe in 12-inch pipe sewer the lump sum of \$20. 3,100 cubic yards, more or less, of concrete furnished and placed at \$7 cubic yard. For laying 20 linear feet, more or less, 18-inch pipe catch-basin drain, including excavation and refill, at 75c. linear foot, 8 manholes, more or less, built on concrete conduit at \$75 each. 1 or more manholes removed and rebuilt on 15-inch pipe sewer at \$50 each. 15 cubic yards, more or less, brick masonry invert lining built in 5-foot 9-inch and 5-foot circular conduits at \$18 cubic yard. 1 or more catch-basins built at \$50 each. 1 or more brick masonry drop-inlet chimneys built at \$150 each. 5 cubic yards, more or less, brick masonry at \$15 cubic yard. 10 cubic yards, more or less, rubble stone masonry wall built at \$5 cubic yard. 10 square yards, more or less, rubble stone paving laid at \$1 square yard. 1 or more connection between new conduit and old 24-inch pipe drain at \$5 each. 6, more or less, connections of old 15-inch and 18-inch pipe drains with new conduit at \$2 each. For placing one 24-inch by 18-inch Y-branch in old 24-inch pipe surface drain, including all incidental work, \$10.		

For placing 44 slants (6 inches to 24 inches) in new conduit, including incidental work, 50c. each.		\$4,774.05 Including extra work amounting to \$88.90	
For all labor and materials required for temporary diversion of brook and restoring surfaces, etc., to original condition on the completion of the work, including all costs and charges, of whatever nature, arising therefrom, the sum of \$100.			
For furnishing earthenware pipe, estimated value of one thousand six hundred dollars (\$1,600), 70 per cent discount from standard list prices.			
McCarthy & Walsh*..... (2 bidders)	May 28, 1910.	123 linear feet, more or less, earth excavation and refill for 2-foot 9-inch by 2-foot 9-inch concrete surface drain, above grade, at \$3.10 linear foot.  219 linear feet, more or less, earth excavation and refill for 2-foot 6-inch by 2-foot 6-inch concrete surface drain, above grade, at \$3.15 linear foot.  10 cubic yards, more or less, earth excavation, below grade, other than for underdrain or pump wells, at \$1.50 cubic yard. 10 cubic yards, more or less, earth excavation in outside trenches at \$1.50 cubic yard. 5 cubic yards, more or less, rock at \$4 cubic yard. 30,000 feet, board measure, more or less, spruce shoring at \$25 M. feet.  4,000 feet, board measure, more or less, spruce platforms, etc., at \$40 M. feet. 10 cubic yards, more or less, gravel refill at \$1.50 cubic yard. For laying 240 linear feet, more or less, 6-inch pipe underdrain at 10c. linear foot. 125 cubic yards, more or less, concrete furnished and placed at \$8.50 cubic yard. For laying 107 linear feet, more or less, 24-inch double thick pipe, for surface drain, including excavation and refill, at \$2.20 linear foot.	
Gainsborough street and St. Botolph street.			

\* The contractor to furnish all the materials except the ironwork and cut stone.

## Sewer Contracts Awarded During 1910-11.—Continued.

CONTRACT.	Awarded to	Dated.	Price per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Gainsborough street and St. Botolph street..	McCarthy & Walsh*..... (2 bidders.)	May 28, 1910.	For laying 250 linear feet, more or less, 15-inch pipe surface drain, including excavation and refill, 93c. linear foot. For laying 279 linear feet, more or less 12-inch pipe surface drain, including excavation and refill, \$1.05 linear foot. For laying 12 linear feet, more or less, 10-inch pipe catch-basin drain, including excavation and refill, \$1 linear foot. 28 more or less (6 inches to 12 inches diameter), pipe connections to be placed in new concrete surface drains 50c. each. For laying and reconnecting 10 linear feet, more or less, of old house drain, including excavation and refill, \$1 linear foot. For laying and reconnecting 14 linear feet, more or less, of old catch-basin drain, including excavation and refill, \$1 linear foot. 4 manholes, more or less, built on concrete surface drains, \$75 each. 2 manholes, more or less, built on pipe surface drains, \$35 each. 2 cubic yards, more or less, Portland brick masonry \$15 cubic yard. 1 or more catch-basin traps set in place \$5 each. 200 square yards, more or less, granite block paving of old blocks, laid with gravel joints on a 6-inch gravel base, \$1.60 per square yard. For furnishing single thick earthenware pipe, estimated value of nine hundred and thirty dollars (\$930), 65 per cent discount from standard list prices. For furnishing double thick earthenware pipe, estimated value of four hundred sixteen dollars (\$416), 55 per cent discount from standard list prices.		

Lucerne, Claxton, Floyd and Stratton streets, Colonial and Massasoit avenues, Dorchester.	James F. Murphy* . . . . . (10 bidders.)	June 1, 1910.	\$8,195.23 \$9,420.35 \$9,420.35
			155 linear feet, more or less, earth excavation and refill for 2 feet 3 inches circular concrete surface drain, above grade, at \$1.80 linear foot.
			230 linear feet, more or less, earth excavation and refill for 2 feet circular combined concrete and channel pipe surface drain, above grade, at \$1.80 linear foot.
			10 cubic yards, more or less, earth excavation, below grade, other than for underdrain or pump wells, at 40c. cubic yard.
			10 cubic yards, more or less, in outside trenches, earth excavation, above grade, at 40c. cubic yard.
			50 cubic yards, more or less, rock at \$4 cubic yard.
			10,000 feet, board measure, more or less, spruce sheeting at \$1 M. feet.
			2,000 feet, board measure, more or less, spruce platforms, etc., at \$1 M. feet.
			10 cubic yards, more or less, gravel refill at 50c. cubic yard.
			For laying 500 linear feet, more or less, 6-inch pipe underdrain 1c. linear foot.
			For laying 100 linear feet, more or less, 8-inch pipe underdrain 1c. linear foot.
			55 cubic yards, more or less, concrete for 2-foot 3-inch circular concrete surface drain at \$7.25 cubic yard.
			60 cubic yards, more or less, concrete for 2-foot circular combined concrete and chan- nel pipe surface drain at \$8.50 cubic yard.
			For laying 572 linear feet, more or less, 1½-inch pipe surface drain, including excavation and refill, 80c. linear foot.
			For laying 3,015 linear feet, more or less, 12- inch pipe surface drain, including excavation and refill, 70c. linear foot.
			For laying 930 linear feet, more or less, 10-inch pipe surface drain, including excavation and refill, 60c. linear foot.
			For laying 319 linear feet, more or less, 10-inch pipe house sewer, including excavation and refill, 80c. linear foot.

\* The contractor to furnish all the materials except the ironwork and cut stone.

## Sewer Contracts Awarded During 1910-11.—Continued.

CONTRACT.	Awarded to	Dated.	Price per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Lucerne, Claxton, Floyd and Stratton streets, Colonial and Massasoit avenues, Dorchester.	James F. Murphy*..... (10 bidders.)	June 1, 1910.	For laying 155 linear feet, more or less, 8-inch pipe house sewer, including excavation and refill, 75c. linear foot. 25, more or less, 6-inch to 10-inch pipe connections placed in new concrete or combined concrete and channel pipe surface drains at 50c. each. 50 linear feet, more or less, of old house drain relaid and reconnected, including excavation and refill, at 35c. linear foot. 10 linear feet, more or less, of old catch-basin drain relaid and reconnected, including excavation and refill, at 50c. linear foot. 10 linear feet, more or less, of old drain relaid, other than house and catch-basin drain, including excavation and refill, at 40c. linear foot. 2 manholes, more or less, built on concrete or combined concrete and channel-pipe surface drains at \$40. each. 27 manholes, more or less, built on pipe sewers or surface drains at \$30 each. 319 linear feet, more or less, of existing 12-inch pipe taken up and removed at 10c. linear foot. 3 manholes on existing 12-inch pipe sewer 8 linear feet, more or less, of existing 4-foot circular brick conduit taken up and removed, together with 8-inch bulkhead and 18-inch pipe connection, the lump sum of \$10. 1 connection made between existing 4-foot circular brick conduit, and new 2-foot 3-inch concrete conduit, together with the building of 8-inch brick bulkhead in the former, the lump sum of \$5.		

4, more or less, connections made between old and new pipe surface drains in Colonial and Massachusetts avenues at \$2 each.  
For placing 1 12-inch by 8-inch Y in existing 12-inch pipe sewer \$2.  
For placing 1 12-inch plant, in existing 10-foot brick conduit at intersection of Callender and Claxton streets, including breaking into and restoring brick masonry, \$5.  
For furnishing earthenware pipe, estimated value of six thousand sixty dollars (\$6,060), 73 per cent discount from standard list prices.

2 cubic yards, more or less, earth excavation, below grade, other than for underdrain, at 50¢, cubic yard.

2 cubic yards, more or less, earth excavation outside trenches at 75¢, cubic yard.

10 cubic yards, more or less, rock at \$4.50 cubic yard.

2 cubic yards, more or less, gravel refill at 50¢, cubic yard.

2,000 feet, board measure, more or less, spruce sheeting at \$5 M. feet.

1,000 feet, board measure, more or less, platform, etc., at \$1 M. feet.

For laying 100 linear feet, more or less, 6-inch pipe underdrain at 1c, linear foot.

2 cubic yards, more or less, concrete at \$7 cubic yard.

For laying 352 linear feet, more or less, 10-inch pipe sewer, including excavation and refill, 85¢, linear foot.

For laying 360 linear feet, more or less, 12-inch pipe surface drain, including excavation and refill, 65¢, linear foot.

For laying 30 linear feet, more or less, 6-inch pipe house drain, including excavation and refill, 70¢, linear foot.

10 linear feet, more or less, of existing house drain relaid at 65¢, linear foot.

6 linear feet, more or less, of existing catch-basin relaid at 70¢, linear foot.

\* The contractor to furnish all the materials except the ironwork and cut stone.

## Sewer Contracts Awarded During 1910-11.—Continued.

CONTRACT.	Awarded to	Dated.	Price per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Tucker street, between Lauriat avenue and Callender street, Dorchester.	James F. Murphy*..... (5 bidders.)	June 4, 1910.	4 linear feet, more or less, of existing drain relaid, other than house and catch-basin drain, at 60¢ linear foot. 2 manholes, more or less, built on sewer at \$40 each. 2 manholes, more or less, built on surface drain at \$32 each. One 8-inch brick bulkhead built in existing 10-inch pipe catch-basin drain the sum of \$5. For furnishing earthenware pipe, estimated value of seven hundred fifty dollars (\$750)—70 per cent from standard list prices.	\$6,250 23 Including extra work amounting to \$403.18	\$5,855 65
Commonwealth and Chestnut Hill avenues, between point 150 feet north of Stratmore road and South street, Brighton.	Antony Cefalo*..... (7 bidders.)	June 7, 1910.	5 cubic yards, more or less, earth excavation at below grade, other than for underdrain, at \$1 cubic yard. 25 cubic yards, more or less, earth excavation in outside trenches at 50¢, cubic yard. 525 cubic yards, more or less, rock at \$2.90 cubic yard. 9,000 feet, board measure, more or less, spruce sheeting at \$1 M. feet. 3 cubic yards, more or less, concrete at \$1 cubic yard. Furnishing and laying 1,065 linear feet, more or less, 10-inch pipe sewer at \$1.60 linear foot. Furnishing and laying 175 linear feet, more or less, 24-inch double thick pipe surface drains at \$2 linear foot. Furnishing and laying 483 linear feet, more or less, 15-inch pipe surface drains at \$1.80 linear foot. Furnishing and laying 210 linear feet, more or less, 12-inch pipe surface drains at \$1.30 linear foot.		

Furnishing and laying 400 linear feet, more or less, 10-inch pipe surface drain at \$1.15 linear foot.		
Furnishing and laying 36 linear feet, more or less, 10-inch pipe catch-basin drain at 75¢. linear foot.		
Furnishing and laying 10 linear feet, more or less, 6-inch pipe chimneys at 25¢, linear foot, 20 linear feet, more or less, of old drain rebuilt at 25¢. linear foot.		
1 or more 30 inches by 24 inches double thick Y furnished and placed in old pipe sewer or drains at \$10 each.		
6 manholes, more or less, built on house sewer at \$50 each.		
7 manholes, more or less, built on surface drain 2 catch-basins, more or less, at \$50 each, 50 cubic yards, more or less, gravel refill at 50¢. cubic yard.		
Furnishing and laying 20 linear feet, more or less, 6-inch pipe underdrain at 10¢. linear foot.		

*Washington Street.*

Joseph B. O'Rourke & Co.*.... (6 bidders.)	June 21, 1910.	\$3,781 74
Washington street, between Rockwell street and Fairmount street, and Fuller street, from Washington street 411 feet east.		\$4,158 30

Washington street, between Rockwell street and Fairmount street, and Fuller street, from Washington street 411 feet east.

5 cubic yards, more or less, earth excavation below grade, other than for underdrain or pump wells, at \$1 cubic yard.		
10 cubic yards, more or less, earth excavation outside trenches at \$1 cubic yard.		
400 cubic yards, more or less, rock at \$3.90 cubic yard.		
5 cubic yards, more or less, gravel refill at \$1 cubic yard.		
2,000 feet, board measure, more or less, spruce sheeting at \$35 M. feet.		
1,000 feet, board measure, more or less, spruce platforms, etc., at \$35 M. feet.		
For laying 300 linear feet, more or less, 6-inch pipe underdrain at 10¢. linear foot.		
2 cubic yards, more or less, concrete at \$7 cubic yard.		

\*The contractor to furnish all the materials except the ironwork and cut stone.

## Sewer Contracts Awarded During 1910-11.—Continued.

CONTRACT.	Awarded to	Dated.	Price per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Washington street, between Rockwell street and Farmount street, and Fuller street, from Washington street 411 feet east.	Joseph B. O'Rourke & Co.*... (6 bidders.)	June 21, 1910.	For laying 511 linear feet, more or less, 12-inch pipe sewer 75c. linear foot. For laying 391 linear feet, more or less, 10-inch pipe sewer 75c. linear foot. 10 linear feet, more or less, of existing house drain relaid at 50c. linear foot. 10 linear feet, more or less, of existing drain relaid, other than house drain, at 50c. linear foot. 5 manholes, more or less, built on sewer at \$40 each. 1 or more old manhole invert and walls rebuilt and connected with new sewer at \$20. For making connection with existing 8-inch pipe chimney, the sum of \$5. 750 square yards, more or less, of existing stone block pavement and flagstone removed and deposited as directed at 50c. a square yard. For furnishing earthenware pipe, estimated value of one thousand forty dollars (\$1,040)—75 per cent from standard list prices.		<p style="text-align: center;"><i>Fuller Street.</i></p> 5 cubic yards, more or less, earth excavation, below grade, other than for underdrain and pump wells, at 75c. cubic yard. 5 cubic yards, more or less, earth excavation outside trenches at 75c. cubic yard. 50 cubic yards, more or less, rock at \$4 cubic yard. 5 cubic yards, more or less, gravel refill at \$1 cubic yard. 2,000 feet, board measure, more or less, spruce sheeting at \$35 M. feet. 1,000 feet, board measure, more or less, spruce platforms, etc., at \$35 M. feet.

2 cubic yards, more or less, concrete at \$7 cubic   yard. For laying 411 linear feet, more or less, 10-inch   pipe sewer, including excavation and refill,   70c. linear foot.			
10 linear feet, more or less, of existing house drain relaid at 75c. linear foot.			
6 linear feet, more or less, of existing drain relaid, other than house drain, at 75c. linear foot.			
1 For more manholes built on sewer at \$10 each. For laying 100 linear feet, more or less, 6-inch pipe underdrain 15c. linear foot.			
1 or more manhole invertS and walls rebuilt and connected with new sewer at \$20 each.			
10 square yards, more or less, of existing stone block pavement and flagstone removed and deposited as directed at 50c. square yard. For furnishing earthenware pipe, estimated value of four hundred seventeen dollars (\$417)—75 per cent from standard list prices.			
		\$856 54	\$1,317 25
1 cubic yard, more or less, earth excavation, below grade, other than for underdrain, at \$1 cubic yard.			
1 cubic yard, more or less, earth excavation, outside trenches, at \$1 cubic yard.			
10 cubic yards, more or less, rock at \$3 cubic yard.			
1 cubic yard, more or less, gravel refill at 50c. cubic yard.			
500 feet, board measure, more or less, spruce sheeting at 1c. M. feet.			
For laying 50 linear feet, more or less, 6-inch pipe underdrain 5c. linear foot.			
1 cubic yard, more or less, concrete at \$4 cubic yard.			
For laying 336 linear feet, more or less, 12-inch pipe sewer, including excavation and refill, \$1.07 linear foot.			
For laying 138 linear feet, more or less, 10-inch pipe sewer, including excavation and refill, \$1.07 linear foot.			

June 27, 1910.  
(6 bidders.)

Charles J. Jacobs Company\*...  
Juliette street, between Fox street and Homes  
avenue, Dorchester.

Street Department — Sewer Division  
Boston, Massachusetts

\* The contractor to furnish all the materials except the ironwork and cut stone.

## Sewer Contracts Awarded During 1910-11.—Continued.

CONTRACT.	Awarded to	Dated.	Price per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Juliette street, between Fox street and Homes avenue, Dorchester.	Charles J. Jacobs Company*... (6 bidders.)	June 27, 1910.	1 or more 12-inch by 12-inch Y, furnished and placed in existing pipe sewer, at \$5 each. For laying 20 linear feet, more or less, 6-inch pipe chimneys 5c. linear foot. 4 manholes, more or less, built on sewer, at \$35 each. 1 cubic yard, more or less, brick masonry at \$12 cubic yard. For furnishing, earthenware pipe, estimated value of five hundred seventy dollars (\$570) — 70 per cent from standard list prices.	\$2,581.74 Including extra work amounting to \$42.94	\$3,160.30
Wool street, between D and E streets, South Boston.	Commonwealth Company.* (7 bidders.)	June 27, 1910.	5 cubic yards, more or less, earth excavation, below grade, other than for underdrain, at \$1.25 cubic yard. 1 or more cubic yards earth excavation, outside trenches, at 75c. cubic yard. 1 or more cubic yards rock at \$2 cubic yard. 120 cubic yards, more or less, gravel refill at \$1.50 cubic yard. 5,600 linear feet, more or less, spruce piles, in place, at 16c. linear foot. 12,000 feet, board measure, more or less, spruce sheeting at \$30 M. feet. 7,000 feet, board measure, more or less, spruce platforms at \$40 M. feet. For laying 207 linear feet, more or less, 6-inch pipe underdrain 10c. linear foot. For laying 242 linear feet, more or less, 8-inch pipe underdrain 10c. linear foot. 5 cubic yards, more or less, concrete at \$7 cubic yard. For laying 207 linear feet, more or less, 12-inch pipe sewer, including excavation and refill, \$2.50 linear foot.		


Dartmouth street, between Beacon street and Boylston streets, city proper.

Peter W. Hill\*.....  
(7 bidders.)


\* The contractor to furnish all the materials except the ironwork and cut stone.

## Sewer Contracts Awarded During 1910-11.—Continued.

CONTRACT.	Awarded to	Dated.	Price per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Dartmouth street, between Beacon street and Boylston streets, city proper.	Peter W. Hill* . . . . . (7 bidders.)	July 1, 1910.	10 linear feet, more or less, of old drain, relaid and reconstructed, including excavation and refill, at \$1 linear foot. 6 manholes, more or less, built on concrete sewers, at \$50 each. 2 cubic yards, more or less, brick masonry at \$10 cubic yard. 1 connection between new 3-foot circular concrete sewer and the intercepting sewer on Beacon street, the lump sum of \$20. 1 ton, more or less, of reinforcing steel, furnished and placed at \$50 ton. 720 linear feet, more or less spruce piles under 20 feet in length, in place at 18c. linear foot. 7,875 linear feet, more or less, spruce piles, from 20 to 30 feet in length, in place, at 18c. linear foot. 1,280 linear feet, more or less, spruce piles, over 30 feet in length, in place, at 20c. linear foot. 770 square yards, more or less, of old granite paving blocks, laid with gravel joints on a 6-inch gravel base, at \$1 square yard. For furnishing single thick earthen pipe, estimated value of nine hundred eighty dollars (\$980), 65 per cent from standard list prices. For furnishing double thick earthen pipe, estimated value of forty-three dollars (\$43), 65 per cent from standard list prices.	\$2,317 53	\$2,465 85
Hyde Park avenue, between Forest Hills square and Walk Hill street, West Roxbury.	James H. Ferguson* . . . . . (4 bidders.)	July 1, 1910.	10 cubic yards, more or less, earth excavation, below grade, other than for underdrain, at \$1 cubic yard. 10 cubic yards, more or less, earth excavation, outside trenches, at 75c. cubic yard. 10 cubic yards, more or less, rock at \$4 cubic yard.	\$2,317 53	\$2,317 53

5,000 feet, board measure, more or less, spruce for sheeting at \$15 M. foot. 500 feet, board measure, more or less, spruce for platforms, etc., at \$35 M. feet. 2 cubic yards, more or less, concrete at \$8 cubic yard. For furnishing and laying 714 linear feet 15-inch pipe \$1.50 linear foot. For furnishing and laying 559 linear feet 10-inch pipe \$1.25 linear foot. 20 linear feet, more or less, 15-inch and 12- inch house sewer, rebuilt and reconnected, at \$1.50 linear foot. 114 linear feet, more or less, of old house drain, rebuilt and reconnected, at 75¢ linear foot. 1 or more 15-inch by 15-inch Y's, furnished and placed in old pipe sewers or drains, at \$4 each. 9 manholes, more or less, at \$41 each. 10 cubic yards, more or less, gravel refill at 60¢, cubic yard. For furnishing and laying 200 linear feet, more or less, 6-inch pipe underdrain 10¢, linear foot. 1 or more old manhole invert, rebuilt and con- nected, with new sewer, at \$7 each. For placing two 12-foot lengths of 16-inch east- iron pipe, including cutting through walls of old Stony brook double channel, the sum of \$50. For placing one 28-foot length of 15-inch spiral riveted steel pipe, the sum of \$20.	\$495 25	\$631 65
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July 6, 1910.  
A. M. Cusack\*.....  
(4 bidders.)

Beech street, between N. Y., N. H. & H. R. R.  
and junction of Centre street and Manthorne  
road, West Roxbury.

\* The contractor to furnish all the materials except the ironwork and cut stone.

## Sewer Contracts Awarded During 1910-11.—Continued.

CONTRACT.	Awarded to	Dated.	Price per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Beech street, between N. Y., N. H. & H. R. R. and junction of Centre street and Manthorne road, West Roxbury.	A. M. Cusack*..... (4 bidders.)	July 6, 1910.	1 cubic yard, more or less, concrete at \$3 cubic yard. For furnishing and laying 221 linear feet, more or less, 10-inch pipe \$1.49 linear foot. For furnishing and laying 2 linear feet, more or less, 6-inch pipe chimney 25c, linear foot. 10 linear feet, more or less, of old house drain rebuilt at \$1 linear foot. 2 manholes, more or less, at \$43 each, 1 or more special inlets built on old manholes at \$5 each. 5 cubic yards, more or less, gravel refill at 50c. 1 cubic yard. For furnishing and laying 10 linear feet, more or less, 6-inch pipe underdrain 10c, linear foot.	\$3,562 62	\$3,739 05
Norfolk and Clarkwood streets, Dorchester....	James H. Ferguson*..... (8 bidders.)	July 7, 1910.	10 cubic yards, more or less, earth excavation, below grade, other than underdrain, at 75c. 1 cubic yard. 10 cubic yards, more or less, earth excavation outside trenches at 75c, cubic yard. 125 cubic yards, more or less, rock at \$4 cubic yard. 10 cubic yards, more or less, gravel refill at 20c, cubic yard. 2,000 feet, board measure, more or less, spruce 2,000 feet, board measure, more or less, spruce for sheeting at \$1 M. feet. For platforms, etc., at \$1 M. feet. For laying 100 linear feet, more or less, 6-inch pipe underdrain 5c, linear foot. 2 cubic yards, more or less, concrete at \$5 cubic yard. For laying 851 linear feet, more or less, 15-inch pipe surface drain, including excavation and refill, 61c, linear foot.	\$3,562 62	\$3,739 05

For laying 930 linear feet, more or less, 12-inch pipe surface drain, including excavation and refill, 58c. linear foot.		
For laying 76 linear feet, more or less, 10-inch pipe catch-basin drain, including excavation and refill, 40c. linear foot.		
For relaying 30 linear feet, more or less, of existing house drain, including excavation and refill, 50c. linear foot.		
For relaying 10 linear feet, more or less, of existing drain, other than house drain, including excavation and refill, 75c. linear foot.		
8 catch-basins, more or less, at \$50 each. 10 manholes, more or less, at \$35 each. 1 or more 15-inch by 15-inch Y's placed in existing pipe surface drain at \$4 each. For furnishing earthenware pipe, estimated value of two thousand five hundred and seven dollars (\$2,507), 70 per cent from standard list prices.	\$9,662 35 Including extra work amounting to \$133.02	\$11,200 20
200 linear feet, more or less, earth excavation and refill in trench with ordinary or tongued and grooved sheeting for 7-foot circular concrete overflow conduit, above grade, at \$7.36 linear foot.		
65 linear feet, more or less, earth excavation and refill in coffer-dam trench for 7-foot circular concrete overflow conduit, above grade, at \$7.36 linear foot.		
20 cubic yards, more or less, earth excavation, below grade, other than for underdrain or pump wells, at \$2 cubic yard.		
1 or more cubic yards earth excavation outside trenches at \$1.50 cubic yard.		
1 cubic yard, more or less, rock at \$5 cubic yard.		
12,300 linear feet, more or less, spruce piles other than bracing piles in coffer-dam at 14c. linear foot, in place.		
13,000 feet board measure, more or less, spruce for sheeting at \$15 M. feet.		
James H. Ferguson†..... (4 bidders.)	July 7, 1910.	
Kimball street, overflow in private land east of Freeport street, Dorchester.		

\* The contractor to furnish all the materials except the ironwork and cut stone.

† The contractor to furnish all the materials except the reinforcing steel.

## Sewer Contracts Awarded During 1910-11.—Continued.

CONTRACT.	Awarded to	Dated.	Price per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Kimball street, overflow in private land east of Fyreport street, Dorchester.	James H. Ferguson†..... (4 bidders.)	July 7, 1910.	23,000 feet, board measure, more or less, 4-inch to 8-inch tongued and grooved sheeting at \$58 M. feet. 4,000 feet, board measure, more or less, spruce for platforms, etc., at \$40 M. feet. 25 cubic yards, more or less, gravel refill at \$1.50 cubic yard. 90 linear feet, more or less, 8-inch pipe under-drain at 30c, linear foot. 90 linear feet, more or less, 10-inch pipe under-drain at 30c, linear foot. 90 linear feet, more or less, 12-inch pipe under-drain at 30c, linear foot. 525 cubic yards, more or less, Class A concrete at \$7 cubic yard. 60 cubic yards, more or less, Class B concrete at \$6.50 cubic yard. 42 cubic yards, more or less, brick masonry at \$14 cubic yard. 9 tons, more or less, of steel reinforcing rods placed in the work at \$50 ton of 2,000 pounds. For placing 12 slants in new conduit \$1 each. For making connection between new conduit and old work, including removal and disposal of existing stone facing, the sum of \$50. For cleaning 335 linear feet, more or less, of old 7-foot and 4-foot overflow conduit including disposal of material removed, \$1.25 linear foot. For furnishing earthenware pipe, estimated value of two hundred twenty-five dollars (\$225), 70 per cent from standard list prices.		

Stony brook conduit, Section 7, West Roxbury.	William J. Barry* (12 bidders.)	July 9, 1910.	691 linear feet, more or less, earth excavation and refill in trench for 20-foot by 10-foot reinforced concrete conduit and 2-foot 8-inch by 4-foot sewer, above grade, including provision for maintaining the flow of Stony brook, by flume or otherwise, at \$24.50 linear foot.	Final payment not made.	\$88,615.84
			118 linear feet, more or less, earth excavation and refill in trench, for 17-foot by 13-foot 9-inch reinforced concrete conduit and 2-foot 8-inch by 4-foot sewer, above grade, at \$36 linear foot.		
			10 linear feet, more or less, earth excavation and refill in trench, for reinforced concrete reducer, above grade, at \$36 linear foot.		
			100 cubic yards, more or less, earth excavation below grade, other than for underdrain, at \$2 cubic yard.		
			100 cubic yards, more or less, earth excavation outside trenches, at \$3 cubic yard.		
			50 cubic yards, more or less, rock, at \$10 cubic yard.		
			67,000 feet, board measure, more or less, spruce for sheeting, at \$30 M. feet.		
			55,000 feet, board measure, more or less, 2-inch tongued and grooved spruce sheeting, at \$50 M. feet.		
			100 cubic yards, more or less, gravel refill at \$2 cubic yard.		
			For laying 500 linear feet, more or less, 6-inch pipe underdrain 30c. linear foot.		
			For laying 850 linear feet, more or less, 10-inch pipe underdrain 30c. linear foot.		
			4,200 cubic yards, more or less, of reinforced concrete, including steel, furnished and placed, for 20-foot by 16-foot conduit and 2-foot 8-inch by 4-foot sewer, minimum section, at \$88 cubic yard.		

\* The contractor to furnish all the materials except the ironwork and spiral riveted pipe.

## Sewer Contracts Awarded During 1910-11.—Continued.

CONTRACT.	Awarded to	Dated.	Price per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Stony brook conduit, Section 7, West Roxbury.	William J. Barry..... (12 bidders.)	July 9, 1910.	750 cubic yards, more or less, of reinforced concrete, including steel, furnished and placed for 20-foot by 16-foot conduit, and 2-foot 8-inch by 4-foot sewer, maximum section, at \$2 cubic yard. 490 cubic yards, more or less, of reinforced concrete, including steel, furnished and placed for 17-foot by 13-foot 9-inch conduit and 2-foot 8-inch by 4-foot sewer, minimum section, at \$7 cubic yard. 140 cubic yards, more or less, of reinforced concrete, including steel, furnished and placed for 17-foot by 13-foot 9-inch conduit and 2-foot 8-inch by 4-foot sewer, maximum section, at \$7 cubic yard. 67 cubic yards, more or less, of reinforced concrete, including steel, furnished and placed in large reducer, at \$7 cubic yard. 100 cubic yards, more or less, of reinforced concrete, including steel, furnished and placed in reducer and connection, at \$7 cubic yard. 20 cubic yards, more or less, concrete, at \$7 cubic yard. 380 cubic yards, more or less, brick masonry at \$13.50 cubic yard. 4 catch-basins, more or less, built at \$55 each. 2 catch-basins, more or less, rebuilt at \$55 each.	90 pipe connections 6-inch to 15-inch diameter, placed in new conduit or sewer, at 50c. each, 18 linear feet, more or less, 12-inch spiral riveted steel pipe placed in work, the sum of \$50. 12 linear feet, more or less, 10-inch spiral riveted steel pipe placed in work, the sum of \$30. For protection of buildings, on Hyde Park avenue, between Tower street and end of the section, the sum of \$50.	

Wait place, westerly from Wait street, Roxbury.	Charles J. Jacobs Company* . . . . . (4 bidders.)	July 11, 1910.	For furnishing earthenware pipe, estimated value of nine hundred dollars (\$900), 70 per cent from standard list prices.	\$412 65	\$836 90
			5 cubic yards, more or less, earth excavation, below grade, other than for underdrain, at \$1 cubic yard.		
			5 cubic yards, more or less, earth excavation, outside trenches, at \$1 cubic yard.		
			5 cubic yards, more or less, rock excavation, at 0e, cubic yard.		
			2,000 feet, board measure, more or less, spruce sheeting at \$0 M. foot.		
			1,000 feet, board measure, more or less, spruce platforms, etc., at \$0 M. feet.		
			5 cubic yards, more or less, concrete at 0e. cubic yard.		
			166 linear feet, more or less, 8-inch pipe sewer at .57c. linear foot.		
			164 linear feet, more or less, 10-inch pipe surface drains at .62c. linear foot.		
			2 manholes, more or less, at \$10 each.		
			1 cubic yard, more or less, brick masonry at \$12 cubic yard.		
			5 cubic yards, more or less, gravel refill at \$1 cubic yard.		
			5 linear feet, more or less, 6-inch or 8-inch pipe underdrain at 0e. linear foot.		
			1 or more old manhole invert and walls rebuilt and connected with new sewer at \$10 each.		
			For furnishing earthenware pipe, estimated value of eighty-one dollars (\$81), 70 per cent from standard list prices.		
Cabot street, between Sterling and Hammond streets, Roxbury.	Edward F. Kennelly* . . . . . (3 bidders.)	July 12, 1910.	170 cubic yards, more or less, earth excavation below grade, other than for underdrain at \$1 cubic yard.	\$3,210 61 including extra work amounting to \$100 96	\$3,967 30
			10 cubic yards, more or less, earth excavation, outside trenches at .75c. cubic yard.		
			1, more or less, cubic yards rock excavation at \$4 cubic yard.		

\* The contractor to furnish all the materials except the ironwork and cut stone.

## Sewer Contracts Awarded During 1910-11.—Continued.

CONTRACT.	AWARDED TO	DATED.	PRICE PER ITEM.	AMOUNT PAID TO CONTRACTOR.	ENGINEER'S PRELIMINARY ESTIMATE.
Cabot street, between Sterling and Hammond streets, Roxbury.	Edward F. Kennedy* . . . . . (3 bidders.)	July 12, 1910.	40 cubic yards, more or less, gravel refill at \$1 cubic yard. 15,000 feet, board measure, more or less, spruce sheathing at \$1 M. foot. 4,000 feet, board measure, more or less, spruce platforms, etc., at \$30 M. feet. For laying 100 linear feet, more or less, 6-inch pipe underdrain 20c. linear foot. 15 cubic yards, more or less, concrete at \$6 cubic yard. For laying 353 linear feet, more or less, 1.5-inch pipe surface drain, including excavation and refill \$1.50 linear foot. For laying 1,088 linear feet, more or less, 12-inch pipe surface drain, including excavation and refill \$1.30 linear foot. For laying 40 linear feet, more or less, 10-inch pipe catch-basin drain, including excavation and refill 50c. linear foot. 30 linear feet, more or less, of existing drain relaid and reconnected, including excavation and refill at 50c. linear foot. 4 catch-basins, more or less, rebuilt at \$52 each. 9 connections made with existing catch-basins, including setting of traps at \$3 each. 12 manholes, more or less, built on surface drains at \$36 each. 1 cubic yard, more or less, brick masonry at \$10 cubic yard. 5 cubic yards, more or less, rubble masonry at \$3.50 cubic yard. 50 square yards, more or less, of granite block paving of old blocks laid with gravel joints on a 6-inch gravel base at 60c. square yard. For furnishing earthenware pipe, estimated value of eighteen hundred and forty-five dollars (\$1,845), 68 per cent from standard list prices.		

Geneva avenue, from Bowdoin street to Columbia road, Dorchester.	Andrew M. Cusack * . . . . . (8 bidders.)	<p>July 22, 1910.   5 cubic yards, more or less, earth excavation, below grade, other than for underdrain, at 50c, cubic yard.</p> <p>5 cubic yards, more or less, earth excavation, outside trenches, at 50c, cubic yard.</p> <p>100 cubic yards, more or less, rock excavation at \$6.50 cubic yard.</p> <p>10 cubic yards, more or less, gravel refill at 50c, cubic yard.</p> <p>10,000 feet, board measure, more or less, spruce sheeting at \$15 M. feet.</p> <p>1,000 foot, board measure, more or less, spruce platforms, etc., at \$15 M. feet.</p> <p>For laying 1,820 linear feet, more or less, 6-inch pipe underdrain 15c, linear foot.</p> <p>5 cubic yards, more or less, Class B concrete at \$7 cubic yard.</p> <p>For laying 1,216 linear feet, more or less, 10-inch pipe sewer, including excavation and refill, \$1.18 linear foot.</p> <p>For laying 1,000 linear feet, more or less, 12-inch pipe sewer, including excavation and refill, \$1.22 linear foot.</p> <p>For laying 35 linear feet, more or less, 18-inch double strength pipe sewer, including excavation and refill, \$1.52 linear foot.</p> <p>For laying 280 linear feet, more or less, 10-inch pipe catch-basin drain, including excavation and refill, 65c, linear foot.</p> <p>For laying 30 linear feet, more or less, 6-inch pipe house drain, including excavation and refill, 60c, linear foot.</p> <p>50 linear feet, more or less, existing house drain relaid and reconnected, including excavation and refill, at 65c, linear foot.</p> <p>10 linear feet, more or less, existing drain relaid and reconnected, other than house, including excavation and refill, at 65c, linear foot.</p> <p>12, more or less, catch-basins built, including excavation and refill, at \$20 each.</p> <p>12 manholes, more or less, at \$37 each.</p> <p>2, more or less, existing manhole invertis rebuilt and connected at \$6 each.</p>	\$6,967.69 Including extra work amounting to \$125.37	\$7,071.50
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\* The contractor to furnish all the materials except the ironwork and cut stone.

## Sewer Contracts Awarded During 1910-11.—Continued.

CONTRACT.	Awarded to	Dated.	Price per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Geneva avenue, from Bowdoin street to Columbia road, Dorchester.	Andrew M. Cusack*..... (8 bidders.)	July 22, 1910.	1 cubic yard, more or less, brick masonry at \$5 cubic yard. 4, more or less, 10-inch to 18-inch slants placed in existing brick sewer at \$3 each. For placing 9, more or less, 15-inch to 24-inch pipe branches in existing pipe sewers at \$5 each 25 linear feet, more or less, 6-inch pipe chimney built at 10c. linear foot. For furnishing single thick earthenware pipe, estimated value of three thousand one hundred dollars (\$3,100), 72 per cent from stand- ard list prices. For furnishing double thick earthenware pipe, estimated value of two hundred dollars (\$200), 68 per cent from standard list prices.	\$4,063 42	\$5,198 50
Friend street, between Traverse and Market streets, city proper.	Joseph B. O'Rourke & Co.*..... (5 bidders.)	July 22, 1910.	282 linear feet, more or less, earth excavation and refill for 30-inch by 36-inch concrete sewer, above grade, at \$6.25 linear foot. 5 cubic yards, more or less, earth excavation, below grade, other than for underdrain, at \$2.50 cubic yard. 5 cubic yards, more or less, earth excavation, outside trenches, at \$1.50 cubic yard. 5 cubic yards, more or less, rock excavation at \$6 cubic yard. 23,000 feet, board measure, more or less, spruce sheeting at \$20 M. feet. 6,000 feet, board measure, more or less, spruce for platforms, etc., at \$40 M. feet. 5 cubic yards, more or less, gravel refill at \$1 cubic yard. For laying 282 linear feet, more or less, 6-inch, 8-inch or 10-inch pipe underdrain 30c. 145 cubic yards, more or less, Class A concrete at \$8.50 cubic yard.		

5 cubic yards, more or less, Class C concrete at \$7.30 cubic yard.			
30, more or less, 6-inch to 12-inch slants placed in new concrete sewer, at \$1 each.			
60 linear feet, more or less, of existing drain re-laid and reconnected in main trench at \$2 linear foot.			
30 linear feet, more or less, of existing drain removed and re-laid, outside of main trench, including excavation and refill, at \$2 linear foot.			
2 manholes, more or less, built on concrete sewers at \$50 each.			
2 cubic yards, more or less, brick masonry at \$14 cubic yard.			
1 connection, between new 30-inch by 36-inch concrete sewer and the 30-inch by 36-inch brick sewer in Traverse street, the sum of \$7.5.			
1,320 linear feet, more or less, spruce piles under 20 feet in length at 30c. linear foot, in place.			
1,320 linear feet, more or less, spruce piles, from 20 feet to 30 feet in length at 35c. linear foot, in place.			
660 linear feet, more or less, spruce piles over 30 feet in length at 40c. linear foot, in place. For furnishing earthenware pipe estimated value of three hundred twenty-five dollars (\$325), at 70 per cent from standard list prices.			
		\$3,908 77	
		\$4,434 36	

July 29, 1910.

Antony Cefalo\*,  
(6 bidders.)Centre street, between a point about 100 feet  
north of Cottage avenue and La Grange  
street, West Roxbury.

\*The contractor to furnish all the materials except the ironwork and cut stone.

## Sewer Contracts Awarded During 1910-11.—Continued.

CONTRACT.	AWARDED TO	DATED.	PRICE PER ITEM.	AMOUNT PAID TO CONTRACTOR.	ENGINEER'S PRELIMINARY ESTIMATE.
Centre street, between a point about 100 feet north of Cottage avenue and La Grange street, West Roxbury.	Antony Cefalo* (6 bidders.)	July 29, 1910.	Furnishing and laying 622 linear feet, more or less, 12-inch pipe sewer at \$4.20 linear foot. Furnishing and placing 100 linear feet, more or less, 6-inch pipe chimneys at 25c. linear foot. 20 linear feet, more or less, of old drain rebuilt at 5c. linear foot. 3 manholes, more or less, at \$50 each. 25 cubic yards, more or less, gravel refill at 1c. cubic yard. Furnishing and laying 400 linear feet, more or less, 6-inch pipe underdrain at 5c. linear foot. Furnishing and laying 222 linear feet, more or less, 8-inch pipe underdrain at 50c. linear foot. 1 or more old manhole invert, rebuilt and connected with new sewer or drain, at \$5 each. For removing one old 10-inch pipe chimney \$2.	\$3,530 85	\$3,499.01 Including extra work amounting to \$15.48.
Corey road, between Washington street and Wellington road, Brighton.	McCarthy & Walsh* (5 bidders.)	July 29, 1910.	2 cubic yards, more or less, earth excavation, below grade, other than for underdrain, at 50c. cubic yard. 5 cubic yards, more or less, earth excavation, outside trenches, at 50c. cubic yard. 450 cubic yards, more or less, rock excavation at \$3.50 cubic yard. 4,000 feet, board measure, more or less, spruce sheeting at \$15 M. feet. 2 cubic yards, more or less, concrete at \$6 cubic yard. Furnishing and laying 453 linear feet, more or less, 8-inch pipe sewer at \$1.15 linear foot. Furnishing and laying 75 linear feet, more or less, 12-inch pipe surface drain at \$1.10 linear foot.	\$1,100 00	

Furnishing and laying 387 linear feet, more or less, 10-inch pipe surface drain at \$1 linear foot.

Furnishing and laying 36 linear feet, more or less, 10-inch pipe catch-basin drain at \$1 linear foot.

Furnishing and laying 3 linear feet, more or less, 6-inch pipe chimneys at .50c. linear foot, 10 linear feet, more or less, of old drain rebuilt at \$1 linear foot.

1 or more manholes built on house sewer at \$40 each.

1 or more manholes built on surface drain at \$35 each.

2 catch-basins, more or less, at \$55 each, 10 cubic yards, more or less, gravel refill at \$1.50 cubic yard.

4, more or less, old manhole invert, rebuilt and connected with new sewer or drain, at \$10 each.

Downer avenue, from DeWolf street, 234 feet northwesterly, Dorchester.

July 29, 1910.  
Andrew M. Cusack\*.....

(7 bidders.)

Lowest bidder Bianco Brothers Company, \$399.  
Second lowest bidder, A. M. Cusack, \$465.11.  
Awarded to second lowest bidder.

1 cubic yard, more or less, earth excavation, below grade, other than for underdrain, at \$25c. cubic yard.

1 cubic yard, more or less, earth excavation, outside trenches, at 50c. cubic yard, 20 cubic yards, more or less, rock excavation at \$4.90 cubic yard, 500 feet, board measure, more or less, spruce sheeting at \$10 M. feet.

1 cubic yard, more or less, concrete at \$5 cubic yard.

Furnishing and laying 234 linear feet, more or less, 8-inch pipe sewer at \$1.19 linear foot, 10 linear feet, more or less, of existing house sewer or drain, including manholes, removed at 50c. linear foot.

Furnishing and laying 20 linear feet, more or less, 6-inch pipe house drain at 60c. linear foot.

4 linear feet, more or less, of old house drain rebuilt at 60c. linear foot,

1 or more manholes at \$38 each.

1 cubic yard, more or less, brick masonry at \$5 cubic yard.

1 cubic yard, more or less, gravel refill at 50c. cubic yard.

1 or more lampholes at \$15 each.

\$504.05

\$391.15

\* The contractor to furnish all the materials except the ironwork and cut stone.

## Sewer Contracts Awarded During 1910-11.—Continued.

CONTRACT.	Awarded to	Dated.	Price per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Warwick street, between Windsor and Ham- mond streets, Roxbury.	John McCourt & Co.* . . . . (8 bidders.)	July 29, 1910.	250 cubic yards, more or less, earth excavation, below grade, other than for underdrain, at \$1.50 cubic yard. 10 cubic yards, more or less, earth excavation, outside trenches, at 75c. cubic yard. 1 cubic yard, more or less, rock excavation at \$1 cubic yard. 400 cubic yards, more or less, gravel refill at \$1 cubic yard. 22,000 feet, board measure, more or less, spruce sheeting at \$15 M. feet. 10,000 feet, board measure, more or less, spruce platforms, etc., at \$35 M. feet. For laying 545 linear feet, more or less, 6-inch pipe underdrain 15c. linear foot. 10 cubic yards, more or less, Class B concrete at \$6 cubic yard. For laying 317 linear feet, more or less, 10-inch pipe sewer, including excavation and refill, \$1.86 linear foot. For laying 228 linear feet, more or less, 12-inch pipe sewer, including excavation and refill, \$2.05 linear foot. For laying 196 linear feet, more or less, 15-inch pipe surface drain, including excavation and refill, \$1.55 linear foot. For laying 116 linear feet, more or less, 18-inch double strength pipe surface drain, including excavation and refill, \$1.88 linear foot. For laying 248 linear feet, more or less, 24-inch double strength pipe surface drain, including excavation and refill, \$2.13 linear foot. For laying 40 linear feet, more or less, 10-inch pipe catch-basin drain, including excavation and refill, 65c. linear foot.	\$4,425.24 Including extra work amounting to \$19.09	\$5,234.65

For laying 40 linear feet, more or less, 6-inch pipe house drain, including excavation and refill, 70c. linear foot.			
265 linear feet, more or less, of existing house drain, relaid and reconnected, including excavation and refill, at 70c. linear foot.			
450 linear feet, more or less, of existing sewer removed, including excavation and refill, at 50c. linear foot.			
3 manholes, more or less, built on pipe sewers, at \$45 each.			
3 manholes, more or less, built on surface drains, at \$40 each.			
1 cubic yard, more or less, brick masonry at \$39.50 cubic yard.			
20 linear feet, more or less, 6-inch pipe chimney built at 15c. linear foot.			
For making 2, more or less, connections with existing sewers \$10 each.			
For furnishing single strength earthware pipe, estimated value of twelve hundred dollars (\$1,200), 68 per cent from standard list prices.			
For furnishing double strength earthware pipe, estimated value of twelve hundred dollars (\$1,200), 56 per cent from standard list prices.			
		\$1,040 85	\$2,654 50

J. C. Coleman Sons Company,\*  
(8 bidders.)

Beacon street, between Ayr road and Cleveland Circle, Brighton.

Aug. 1, 1910.			
1 cubic yard, more or less, earth excavation, below grade, other than for underdrain, at \$1 cubic yard.			
5 cubic yards, more or less, earth excavation, above grade, outside trenches, at \$1 cubic yard.			
400 cubic yards, more or less, rock excavation, at \$3.35 cubic yard.			
2,000 feet, board measure, more or less, spruce sheeting at \$1 M. feet.			
2 cubic yards, more or less, concrete at \$4 cubic yard.			
For furnishing and laying 440 linear feet, more or less, 8-inch pipe sewer \$1 linear foot, 10 linear feet, more or less, of old drain rebuilt at 75c. linear foot.			

\* The contractor to furnish all the ironwork except the ironwork and cut stone.

## Sewer Contracts Awarded During 1910-11.—Continued.

CONTRACT.	AWARDED TO	DATED.	PRICE PER ITEM.	AMOUNT PAID TO CONTRACTOR.	ENGINEER'S PRELIMINARY ESTIMATE.
Beacon street, between Ayr road and Cleveland Circle, Brighton.	J. C. Coleman Sons Company,* (8 bidders.)	Aug. 1, 1910.	2 manholes, more or less, at \$35 each. 5 cubic yards, more or less, gravel refill at 5c. For furnishing and laying 10 linear feet, more or less, 6-inch pipe underdrain \$1 1 or more old manhole invert's rebuilt and connected at \$5 each.	\$7,669.87 including extra work amounting to \$37.35.	\$7,278.51
Geneva avenue, from Blue Hill avenue to Columbia road, Dorchester.	Murphy & Dolan* ^ (11 bidders.)	Aug. 17, 1910.	485 linear feet, more or less, earth excavation and refill for 30-inch circular concrete drain, above grade, at \$2 linear foot. For laying 171 linear feet, more or less, 12-inch pipe sewer, including excavation and refill, \$1.50 linear foot. For laying 352 linear feet, more or less, 10-inch pipe sewer, including excavation and refill, \$1 linear foot. For laying 170 linear feet, more or less, 15-inch pipe surface drain in trench with new sewer, including excavation and refill, 18c. linear foot. For laying 460 linear feet, more or less, 12-inch pipe surface drain in trench with old sewer, including excavation and refill, \$1.20 linear foot. For laying 75 linear feet, more or less, 10-inch pipe catch-basin drains, including excavation and refill, 75c. linear foot. 1 cubic yard, more or less, earth excavation, be- low grade, other than for underdrain at \$1.25 cubic yard.		

2 cubic yards, more or less, earth excavation, above grade, outside trenches, at \$1.50 cubic yard.
55 cubic yards, more or less, rock at \$3 cubic yard.
2,000 feet, board measure, more or less, spruce shooting at \$1 M. foot.
10 cubic yards, more or less, gravel refill at \$1.25 cubic yard.
For laying 200 linear feet, more or less, 6-inch pipe underdrain 8c. linear foot.
120 cubic yards, more or less, Class A concrete at \$7.50 cubic yard.
40, more or less, pipe slants or connections placed in new concrete drain at 15c. each.
50 linear feet, more or less, of existing pipe sewer relaid and reconnected at 35c. linear foot.
60 linear feet, more or less, of existing house drain removed and relaid at 75c. linear foot.
50 linear feet, more or less, 6-inch pipe drain carried under new surface drain at 75c. linear foot.
10 manholes, more or less, built on pipe sewers or drains at \$43 each.
3 manholes, more or less, built on concrete surface drains at \$35 each.
6 manholes, more or less, rebuilt on existing sewers, including excavation, removal of old work and refill at \$18 each.
1 or more connections with existing manholes at \$3 each.
3 catch-basins, more or less, built, including removal of existing structures, at \$50 each.
30 cubic yards, more or less, brick masonry at \$15 cubic yard.
1 or more 15-inch pipe connections made with existing surface drain at \$3 each.
1 or more 30 inches diameter connections made with existing surface drain at \$5 each.
For furnishing carthenware pipe, estimated value of eighteen hundred ninety dollars (\$1,890)—72 per cent from standard list prices.

\*The contractor to furnish all the materials except the ironwork and cut stone.

## Sewer Contracts Awarded During 1910-11.—Continued.

CONTRACT.	Awarded to	Dated.	Price per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Augustus avenue and Ethel street, between Vista and Edna streets, West Roxbury.	Charles J. Jacobs Company*... (8 bidders.)	Aug. 19, 1910.	5 cubic yards, more or less, earth excavation, below grade, other than for underdrain, at \$1 cubic yard. 5 cubic yards, more or less, earth excavation, above grade, outside trenches at \$1 cubic yard. 10 cubic yards, more or less, rock at \$2.50 cubic yard. 1,000 feet, board measure, more or less, spruce sheeting at \$00 M. feet. 3 cubic yards, more or less, concrete at \$5 cubic yard. For furnishing and laying 619 linear feet, more or less, 10-inch pipe sewer \$1.26 linear foot. For furnishing and laying 48 linear feet 6-inch pipe chimneys 22c, linear foot. 10 linear feet, more or less, of old drain rebuilt at 60c. linear foot. 3 manholes, more or less, at \$45 each. 5 cubic yards, more or less, gravel refill at 00c cubic yard. 1 or more old manhole inverters rebuilt at \$10 each.	\$949 78	\$1,103 51
Park street, from Waldeck street to Greenbrier street, Dorchester.	Murphy & Dolan*..... (8 bidders.)	Aug. 24, 1910.	5 cubic yards, more or less, earth excavation, below grade, other than for underdrain, at 1c. cubic yard. 10 cubic yards, more or less, earth excavation, outside trenches at 25c. cubic yard. 25 cubic yards, more or less, rock at \$3 cubic yard. 2,000 feet, board measure, more or less, spruce sheeting at \$1 M. feet. 1,000 feet, board measure, more or less, spruce platforms, etc., at \$1 M. feet. 2 cubic yards, more or less, concrete at \$5 cubic yard.	\$1,705 09	\$1,891 60

<p>For laying 860 linear feet, more or less, 10-inch pipe sewer \$1.35 linear foot.</p> <p>For placing 50 linear feet, more or less, 6-inch pipe chimneys 15c. linear foot.</p> <p>10 linear feet, more or less, of old house drain rebuilt at 75c. linear foot.</p> <p>For each linear foot old catch-basin drain rebuilt, \$1 linear foot.</p> <p>Each linear foot of old drain rebuilt, other than house and catch-basin drain, \$1.4 manholes, more or less, at \$38 each, 5 cubic yards, more or less, gravel refill at 50c. cubic yard.</p> <p>For laying 120 linear feet, more or less, 6-inch pipe underdrain 1c. linear foot.</p> <p>1 or more old manhole invert and walls rebuilt and connected with new sewer, with jug handle pattern at \$10 each.</p> <p>For furnishing earthenware pipe, estimated value of nine hundred thirty-two dollars (\$932)—73 per cent from standard list prices.</p>	<p>Final payment made.</p>	<p>\$18,628 10</p>
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<p>Excavating the Canterbury branch of Stony brook, from Asylum road to Harvard street, and building culverts in Farm road and Morton street, West Roxbury.</p>	<p>J. C. Coleman &amp; Sons Company,* Aug. 24, 1910. (12 bidders.)</p>	<p>3,675 linear feet, more or less, earth excavation in trench for open channel at \$1.90 linear foot.</p> <p>47 linear feet, more or less (measured between the extremities of wing walls), of earth excavation in trench for 13-foot 6-inch by 6-foot 6-inch reinforced concrete culvert, crossing under Farm road, at \$4 linear foot.</p> <p>102 linear feet, more or less (measured between the extremities of wing walls), of earth excavation in trench for 13-foot 6-inch by 6-foot 6-inch reinforced concrete culvert, crossing under Morton street, at \$4 linear foot.</p> <p>10 cubic yards, more or less, rock in trench (Item 1) or in excavation for culverts (Items 2 and 3) at \$2.50 cubic yard.</p> <p>For building 13-foot 6-inch by 6-foot 6-inch reinforced (Class A) concrete culvert, wing walls, parapet walls, etc., at crossing of Farm road, together with the furnishing of all materials, the sum of \$2,200.</p>
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\* The contractor to furnish all the materials except the ironwork and cut stone.

## Sever Contracts Awarded During 1910-11.—Continued.

CONTRACT.	Awarded to	Dated.	Price per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Excavating the Canterbury branch of Stony brook, from Asylum road to Harvard street, and building culverts in Farm road and Morton street, West Roxbury.	J. C. Coleman & Sons Company,* (12 bidders.)	Aug. 24, 1910.	For building 13-foot 6-inch by 6-foot 6-inch reinforced (Class A) concrete culvert, wing walls, parapet walls, etc., at crossing of Morton street, together with the furnishing of all materials, the sum of \$3,900. For building 3,675 linear feet, more or less, of 2-foot 9-inch and 1-foot 3-inch by 2-foot wooden flume, \$1.05 linear foot. 4,000 feet, board measure, more or less, spruce sheeting for 10-inch pipe sewer at \$20 M. feet. For laying 150 linear feet, more or less, 6-inch pipe underdrain, in connection with 10-inch pipe sewer, 15c. linear foot. For laying 500 linear feet, more or less, 10-inch pipe surface drains connecting with open channel, including excavation and refill, 20c. linear foot. For laying 150 linear feet, more or less, 10-inch pipe sewer, including excavation and refill, \$1 linear foot. 5 cubic yards, more or less (Class B), concrete for foundation or protection for 10-inch pipe sewer at \$5 cubic yard. 30 cubic yards, more or less, rubble stone masonry, placed on slopes, at 10-inch pipe surface drain outlets, at \$5 cubic yard. 100 cubic yards, more or less, riprap at \$4.50 cubic yard. For furnishing and laying 150 square yards, more or less, of stone paving for gutters and side slopes \$1.50 square yard. For filling and grading 3,700 linear feet, more or less, of existing brook channels, including old culvert at Farm road, 15c. linear foot. For filling Farm road to proposed subgrade the sum of \$75.		

		\$301.95
		\$310.17
Sept. 8, 1910. George J. Regan * (6 bidders.)	1 manhole built on 10-inch pipe sewer at \$40. 1 10-inch pipe sewer connection with existing 4-foot 3-inch circular brick sewer at \$45. For furnishing earthenware pipe estimated value of five hundred twelve dollars (\$512) —72 per cent from standard list prices.	1 manhole built on 10-inch pipe sewer at \$40. 1 10-inch pipe sewer connection with existing 4-foot 3-inch circular brick sewer at \$45. For furnishing earthenware pipe estimated value of five hundred twelve dollars (\$512) —72 per cent from standard list prices.
Mozart place, between old manhole in Priess street and Mozart street, Roxbury.	2 cubic yards, more or less, earth excavation other than for underdrain at 1c. cubic yard. 5 cubic yards, more or less, earth excavation, above grade, outside trenches at 1c. cubic yard. 2 cubic yards, more or less, rock at 1c. cubic yard. 2 cubic yards, more or less, gravel refill at 1c. cubic yard. 1,000 feet, board measure, more or less, spruce shoeing at 1c. M. feet, 1,000 feet, board measure, more or less, spruce platforms, etc., at 1c. M. feet, For laying 5 linear feet, more or less, 6-inch pipe underdrain 1c. linear foot. For laying 161 linear feet, more or less, 8-inch pipe sewer, including excavation and refill, \$31.10 linear foot. For relaying and connecting 10 linear feet, more or less, of existing house drain in main trench 1c. linear foot. For relaying and connecting 10 linear feet, more or less, of existing house drain out- side of main trench, including excavation and refill, at 1c. linear foot. 2 cubic yards, more or less, Class A concrete at 1c. cubic yard. 2 manholes, more or less, at \$50 each. 1 or more manhole inverters and walls rebuilt and connected with new sewer or drain at \$5 each. 1 cubic yard, more or less, brick masonry at 1c. cubic yard. For furnishing earthenware pipe, estimated value of one hundred two dollars (\$102), 70 per cent from standard list prices.	2 cubic yards, more or less, earth excavation other than for underdrain at 1c. cubic yard. 5 cubic yards, more or less, earth excavation, above grade, outside trenches at 1c. cubic yard. 2 cubic yards, more or less, rock at 1c. cubic yard. 2 cubic yards, more or less, gravel refill at 1c. cubic yard. 1,000 feet, board measure, more or less, spruce shoeing at 1c. M. feet, 1,000 feet, board measure, more or less, spruce platforms, etc., at 1c. M. feet, For laying 5 linear feet, more or less, 6-inch pipe underdrain 1c. linear foot. For laying 161 linear feet, more or less, 8-inch pipe sewer, including excavation and refill, \$31.10 linear foot. For relaying and connecting 10 linear feet, more or less, of existing house drain in main trench 1c. linear foot. For relaying and connecting 10 linear feet, more or less, of existing house drain out- side of main trench, including excavation and refill, at 1c. linear foot. 2 cubic yards, more or less, Class A concrete at 1c. cubic yard. 2 manholes, more or less, at \$50 each. 1 or more manhole inverters and walls rebuilt and connected with new sewer or drain at \$5 each. 1 cubic yard, more or less, brick masonry at 1c. cubic yard. For furnishing earthenware pipe, estimated value of one hundred two dollars (\$102), 70 per cent from standard list prices.

\*The contractor to furnish all the materials except the ironwork and cut stone.

## Sewer Contracts Awarded During 1910-11.—Continued.

CONTRACT.	Awarded to	Dated.	Price per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Rockview street, between old sewer 220 feet north of Robinwood avenue and Robinwood avenue, West Roxbury.	Rafife Cartullo *.....(6 bidders)	Sept. 17, 1910.	1 cubic yard, more or less, earth excavation, below grade, other than for underdrain, at 30c. cubic yard. 5 cubic yards, more or less, earth excavation, above grade, outside trenches at 30c. cubic yard. 175 cubic yards, more or less, rock at \$3.50 cubic yard. 5 cubic yards, more or less, gravel refill at \$1 cubic yard. 2,000 feet, board measure, more or less, spruce sheeting at \$20 M. feet. For laying 220 linear feet, more or less, 10-inch pipe sewer, including excavation and refill, 80c. linear foot. For laying and reconnecting 10 linear feet, more or less, of existing drain in main trench 75c. linear foot. 1 cubic yard, more or less, Class A concrete at \$6 cubic yard. 1 or more manholes at \$30 each. For furnishing earthenware pipe, estimated value of two hundred ten dollars (\$210), 65 percent from standard list prices.	\$882 44	\$1,219 50
Maynard street, from Poplar street to Metropolitan avenue; Metropolitan avenue, from Maynard street, to Poplar street; Edridge street, from Metropolitan avenue to point 300 feet southwesterly, West Roxbury.	Murphy & Dolan *.....(9 bidders)	Sept. 21, 1910.	10 cubic yards, more or less, earth excavation, below grade, other than for underdrain, at 50c. cubic yard. 15 cubic yards, more or less, earth excavation, above grade, outside trenches at \$1 cubic yard. 115 cubic yards, more or less, rock at \$3 cubic yard. 10 cubic yards, more or less, gravel refill at 25c. 8,000 feet, board measure, more or less, spruce sheeting at \$15 M. feet.	\$4,463 79	\$4,549 50

For laying 275 linear feet, more or less, 6-inch pipe underdrain 5c, linear foot.	
For laying 732 linear feet, more or less, 10-inch pipe sewer, including excavation and refill in Maynard street, \$2.40 linear foot.	
For laying 40 linear feet, more or less, 10-inch pipe sewer, including excavation and refill in Metropolitan avenue, \$1.30 linear foot.	
For laying 325 linear feet, more or less, 10-inch pipe sewer, including excavation and refill in Eldredge street, \$1.30 linear foot.	
For placing 200 linear feet, more or less, 6-inch pipe chimneys 15c, linear foot.	
For relaying and reconnecting 20 linear feet, more or less, of existing drain in main trench, 75c, linear foot.	
10 cubic yards, more or less, class A concrete at \$6 cubic yard.	
8 manholes, more or less, at \$50 each.	
1 or more of existing manhole inverta rebuilt and connected with new sewer or drain at \$5 each.	
For furnishing earthenware pipe, estimated value of sixteen hundred thirty dollars (\$1,630), 73 per cent from standard list prices.	\$229 17

Antony Cefalo\*..... Sept. 27, 1910.  
(8 bidders.)

Danville street, between Wren street and Belleview street, West Roxbury.

1 cubic yard, more or less, earth excavation below grade, other than for underdrain, at 1c. cubic yard.	\$338 00
5 cubic yards, more or less earth excavation outside trenches, at 1c. cubic yard.	
5 cubic yards, more or less, rock at 1c. cubic yard.	
2 cubic yards, more or less, gravel refill at 1c. cubic yard.	
1,000 feet, board measure, more or less, spruce sheeting at 1c. M. feet.	
For laying 250 linear feet, more or less, 10-inch pipe surface drain, including excavation and refill, 50c, linear foot.	
For relaying and reconnecting 20 linear feet, more or less, of existing drain in main trench 1c. linear foot.	

\* The contractor to furnish all the materials except the ironwork and cut stone.

## Sewer Contracts Awarded During 1910-11.—Continued.

CONTRACT.	Awarded to	Dated.	Price per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Danville street, between Wren street and Bellevue street, West Roxbury.	Antony Cefalo*..... (8 bidders.)	Sept. 27, 1910.	For placing 1 or more Y's in existing pipe sewers or drains \$2 each. 1 cubic yard, more or less, Class A concrete at 1c. cubic yard. 1 or more manholes built on surface drains at \$30 each. For furnishing earthenware pipe, estimated value of two hundred thirty dollars (\$230), 70 per cent from standard list prices.	\$1,056 34	\$1,446 50
Ainsworth street, between South street and Centre street, West Roxbury.	Antony Cefalo *..... (11 bidders.)	Oct. 3, 1910.	5 cubic yards, more or less, earth excavation below grade, other than for underdrain, at 1c. cubic yard. 5 cubic yards, more or less, earth excavation outside trenches at 1c. cubic yard. 25 cubic yards, more or less, rock at \$1 cubic yard. 5 cubic yards, more or less, gravel refill at 1c. cubic yard. 1,000 feet, board measure, more or less, spruce sheeting at 1c. M. feet. For laying 240 linear feet, more or less, 12-inch pipe surface drain, including excavation and refill, 59c. linear foot. For laying 660 linear feet, more or less, 10-inch pipe surface drain, including excavation and refill, 50c. linear foot. For laying 50 linear feet, more or less, 10-inch pipe catch-basin drain, including excavation and refill, 50c. linear foot. For relaying and reconnecting 70 linear feet, more or less, of existing house drain in main trench 20c. linear foot. 1 cubic yard, more or less, Class A concrete at 1c. cubic yard. 3, more or less, manholes built on surface drain at \$30 each.		

			\$4,206 34
		Final payment not made.	
Rockdale and Rosewood streets, Dorchester . . . J. C. Coleman & Sons Company,* Oct. 5, 1910. (10 bidders.)	<p>4 catch-basins, more or less, at \$50 each.</p> <p>1 or more manholes inverted and connected with new sewer or drain at \$5 each.</p> <p>For furnishing earthenware pipe, estimated value of nine hundred fifty dollars (\$950), 74 per cent from standard list prices.</p> <p>5 cubic yards, more or less, earth excavation below grade, other than for underdrain, at \$50; cubic yard.</p> <p>5 cubic yards, more or less, earth excavation outside trenches at \$1 cubic yard.</p> <p>600 cubic yards, more or less, rock at \$3.70 cubic yard.</p> <p>5 cubic yards, more or less, gravel refill at 1c. cubic yard.</p> <p>1,000 feet, board measure, more or less, spruce sheathing at \$1 M. feet.</p> <p>1,000 feet, board measure, more or less, spruce platforms, etc., at \$1 M. feet.</p> <p>For laying 100 linear feet, more or less, 6-inch pipe underdrain 1.5c. linear foot.</p> <p>For laying 448 linear feet, more or less, 18-inch double strength pipe sewer, including excavation and refill in Rockdale street, \$1 linear foot.</p> <p>For laying 410 linear feet, more or less, 12-inch pipe sewer, including excavation and refill in Rosewood street, \$1 linear foot.</p> <p>For placing 50 linear feet, more or less, 6-inch pipe chimneys 25c. linear foot.</p> <p>For relaying and reconnecting 10 linear feet, more or less, of existing house drain in main trench, \$1 linear foot.</p> <p>For relaying and reconnecting 10 linear feet, more or less, of existing drain in main trench, other than house and catch-basin drain, \$1 linear foot.</p> <p>For relaying and reconnecting 10 linear feet, more or less, of existing house drain, outside of main trench, including excavation and refill, 50c. linear foot.</p>		

\* The contractor to furnish all the materials except the ironwork and cut stone.

## Sewer Contracts Awarded During 1910-11.—Continued.

CONTRACT.	Awarded to	Dated.	Price per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Rockdale and Rosewood streets, Dorchester . . .	J. C. Coleman & Sons Company.* (10 bidders.)	Oct. 5, 1910.	For relaying and reconnecting 10 linear feet, more or less, of existing drain, outside main trench, other than house and catch-basin drain, including excavation and refill, 50c. linear foot. 2 cubic yards, more or less, Class A concrete at \$7 cubic yard. 3 manholes, more or less, at \$35 each. 2, more or less, existing manhole invertis rebuilt and connected with new sewer or drain at \$5 each. 1 or more connections, between new and existing sewers at \$5 each. For furnishing earthenware pipe, single strength, estimated amount of five hundred ten dollars (\$510), 72 per cent from standard list prices. For furnishing earthenware pipe, double strength, estimated amount of nine hundred fifty-four dollars (\$954), 70 per cent discount from standard list prices.	\$715 30	
Atkins street, between Hunnewell avenue and 100 feet north of Stratton street, Brighton.	George J. Regan* . . . . . (11 bidders.)	Oct. 3, 1910.	1 cubic yard, more or less, earth excavation, below grade, other than for underdrain, at 1c. cubic yard. 5 cubic yards, more or less, earth excavation, outside trenches, at 1c. cubic yard. 30 cubic yards, more or less, rock excavation at 1c. cubic yard. 5 cubic yards, more or less, gravel refill at 1c. cubic yard. 1,000 feet, board measure, more or less, spruce sheeting at 1c. M. feet. 50 linear feet, more or less, 6-inch pipe under-drain at 1c. linear foot.	\$519 91	

For laying 440 linear feet, more or less, 8-inch pipe sewer, including excavation and refill, 81c. linear foot.			
For placing 18 linear feet, more or less, 6-inch pipe chimneys 10c. linear foot.			
For relaying and reconnecting 10 linear feet, more or less, of existing drain in main trench 1c. linear foot.			
1 cubic yard, more or less, Class A concrete at 1c. cubic yard.			
2 manholes, more or less, at \$40 each.			
1, or more, manhole invert, rebuilt and connected with new sewer or drain, at \$5 each.			
For furnishing earthenware pipe, estimated value of three hundred ten dollars (\$310), at 72 per cent from standard list prices.			
		Final payment not made.	
5 cubic yards, more or less, earth excavation, below grade, other than for underdrain, at 1c. cubic yard.			
5 cubic yards, more or less, earth excavation, outside trenches, at 1c. cubic yard.			
300 cubic yards, more or less, rock excavation at \$4 cubic yard.			
5 cubic yards, more or less, gravel refill at 1c. cubic yard.			
6,000 feet, board measure, more or less, spruce sheeting at 1c. M. feet.			
For laying 393 linear feet, more or less, 10-inch pipe sewer, including excavation and refill, 50c. linear foot.			
For laying 225 linear feet, more or less, 18-inch double strength pipe surface drain, including excavation and refill, 70c. linear foot.			
For laying 415 linear feet, more or less, 10-inch pipe surface drain, including excavation and refill, 65c. linear foot.			
For laying 70 linear feet, more or less, 10-inch pipe catch-basin drain, including excavation and refill, 75c. linear foot.			
For placing 15 linear feet, more or less, 6-inch pipe chimneys 10c. linear foot.			
		\$3,017 15	
George J. Regan*.....	Oct. 6, 1910.		
(11 bidders.)			
Quint avenue, between Princeton avenue and Brighton avenue, Brighton.			

\* The contractor to furnish all the materials except the ironwork and cut stone.

## Sewer Contracts Awarded During 1910-11.—Continued.

CONTRACT.	Awarded to	Dated.	Price per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Quint avenue, between Princeton avenue and Brighton avenue, Brighton.	George J. Regan* (11 bidders.)	Oct. 6, 1910.	For relaxing and reconnecting 50 linear feet, more or less, of existing drain in main trench 50c, linear foot. For placing 1, or more Y's in existing pipe sewers or drains \$5 each. 1 cubic yard, more or less, Class A concrete at \$10 cubic yard. 1 or more manholes built on sewer at \$45 each, 3 manholes, more or less, built on surface drain at \$35 each. 4 catch-basins, more or less, at \$50 each. 1 or more manhole inverta rebuilt and connected with new sewer or drain at \$5 each. For furnishing earthenware pipe, single strength, estimated value of eight hundred thirty dollars (\$830), 72 per cent discount from standard list prices. For furnishing earthenware pipe, double strength, estimated value of four hundred seventy dollars (\$470), 58 per cent discount from standard list prices.	\$6,235 85	Final payment not made.
Morton, Leslie and Wildwood streets, Dorchester.	Luke D. Mullen* (16 bidders.)	Oct. 19, 1910.	95 linear feet, more or less, earth excavation and refill for 2-foot 3-inch circular concrete conduit at 70c, linear foot. 349 linear feet, more or less, earth excavation and refill for 2-foot circular concrete conduit at 65c, linear foot. 10 cubic yards, more or less, earth excavation below grade, other than for underdrain, at 1c, cubic yard. 10 cubic yards, more or less, earth excavation, outside trenches, at 1c, cubic yard. 400 cubic yards, more or less, rock excavation at \$3.60 cubic yard. 10 cubic yards, more or less, gravel refill at 1c, cubic yard.		

2,000 feet, board measure, more or less, spruce sheeting at \$30 M. feet.
1,000 feet, board measure, more or less, spruce platforms, etc., at \$1 M. feet.
For laying 160 linear feet, more or less, 6-inch pipe underdrain 10c. linear foot.
29 cubic yards, more or less, Class A concrete for 2-foot 3-inch circular concrete conduit at \$7.75 cubic yard.
90 cubic yards, more or less, Class A concrete for 2-foot circular concrete conduit at \$7.75 cubic yard.
2 cubic yards, more or less, Class A concrete, other than called for in preceding items, at \$5 cubic yard.
For laying 100 linear feet, more or less, 10-inch pipe sewer, including excavation and refill, 60c. linear foot.
For laying 307 linear feet, more or less, 18-inch pipe surface drain, including excavation and refill, 75c. linear foot.
For laying 333 linear feet, more or less, 15-inch pipe surface drain, including excavation and refill, 65c. linear foot.
For laying 350 linear feet, more or less, 12-inch pipe surface drain, including excavation and refill, 30c. linear foot.
For laying 180 linear feet, more or less, 10-inch pipe surface drain, including excavation and refill, 60c. linear foot.
For laying 121 linear feet, more or less, 10-inch pipe catch-basin drain, including excavation and refill, 60c. linear foot.
For relaying and reconnecting 20 linear feet, more or less, of existing house drain in main trench 15c. linear foot.
For relaying and reconnecting 10 linear feet, more or less, of existing drain in main trench, other than house and catch-basin drain, 30c. linear foot.
For relaying and reconnecting 10 linear feet, more or less, of existing house drain, outside of main trench, including excavation and re- fill, 40c. linear foot.

\* The contractor to furnish all the materials except the ironwork and cut stone.

## Sewer Contracts Awarded During 1910-11.—Continued.

CONTRACT.	Awarded to	Dated.	Price per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Morton, Leslie and Wildwood streets, Dorchester.	Luke D. Mullen* ..... (16 bidders.)	Oct. 19, 1910.	For relaying and reconnecting 10 linear feet, more or less, of existing drain outside of main trench, other than house and catch-basin drain, including excavation and refill, 10c. linear foot. For placing 2, more or less, Y's in existing 30-inch pipe sewers or drains \$2 each. For placing 1 or more slants or connections in existing masonry sewers or drains at 5c. each. For placing 14, more or less, slants or connections in new masonry sewers or drains 5c. each. 1 or more manholes built on sewer at \$50 each. 12 manholes, more or less, built on surface drain at \$30 each. 7 catch-basins, more or less, at \$30 each. 2, more or less, existing manhole invert and walls rebuilt and connected with new sewer or drain at \$5 each. For furnishing earthenware pipe, single strength, estimated value of twenty-four hundred ninety dollars (\$2,490), 68 per cent discount from standard list prices. For furnishing earthenware pipe, double strength, estimated value of fifty-five dollars (\$55), 58 per cent discount from standard list prices.		\$364.94
Edgewater Drive, between Tokio and Testa streets, Dorchester.	R. Cartullo * ..... (5 bidders.)	Nov. 22, 1910.	10 cubic yards, more or less, earth excavation, below grade, other than for underdrain, at 1c. cubic yard. 5 cubic yards, more or less, earth excavation outside trenches at 1c. cubic yard. 5 cubic yards, more or less, rock at 1c. cubic yard. 10 cubic yards, more or less, gravel at 1c. cubic yard.	\$773.37	

3,000 feet, board measure, more or less, spruce sheeting at \$20 M. feet. 2,000 feet, board measure, more or less, spruce platforms, etc., at \$25 M. feet. For laying 200 linear feet, more or less, 6-inch pipe underdrain 25c, linear foot. For laying 200 linear feet, more or less, 12-inch pipe sewer, including excavation and refill, 80c, linear foot. 15 cubic yards, more or less, Class A concrete at \$6 cubic yard. 1 or more existing manholes and walls rebuilt and connected with new sewer or drain at \$4 each.	\$4	\$3,583 70
For furnishing earthenware pipe, estimated value of two hundred ninety-one dollars (\$291), 65 per cent from standard list prices.	\$2,802 54	\$2,802 54

5 cubic yards, more or less, earth excavation, below grade, other than for underdrain, at 1c. cubic yard. 5 cubic yards, more or less, earth excavation outside trenches at 1c. cubic yard. 60 cubic yards, more or less, rock at \$3 cubic yard. 5 cubic yards, more or less, gravel at 1c. cubic yard. 3,000 feet, board measure, more or less, spruce sheeting at 1c. M. feet. 500 feet, board measure, more or less, spruce platforms, etc., at 1c. M. feet. For laying 350 linear feet, more or less, 6-inch pipe underdrain 1c. linear foot. For laying 250 linear feet, more or less, 20- inch double thick pipe surface drain, including excavation and refill, \$1 linear foot. For laying 531 linear feet, more or less, 18- inch double thick pipe surface drain, includ- ing excavation and refill 85c. linear foot. For laying 223 linear feet, more or less, 15- inch pipe surface drain, including excava- tion and refill, 60c. linear foot.	\$3,583 70	\$3,583 70
Nov. 23, 1910.		

Antony Cefalo\*.....  
(9 bidders.)

Emmons road, between Linnett street and  
Board of Survey Street No. 665, and Howitt  
street, between Bellevue and La Grange  
streets, West Roxbury.

\* The contractor to furnish all the materials except the ironwork and cut stone.

## Sewer Contracts Awarded During 1910-11.—Continued.

CONTRACT.	AWARDED TO	DATED.	PRICE PER ITEM.	AMOUNT PAID TO CONTRACTOR.	ENGINEER'S PRELIMINARY ESTIMATE.
Emmons road, between Linnett street and Board of Survey Street No 665, and Hovitt street, between Bellevue and La Grange streets, West Roxbury.	Antony Cefalo*..... (9 bidders.)	Nov. 23, 1910.	For laying 220 linear feet, more or less, 12-inch pipe surface drain, including excavation and refill, 60c, linear foot. For laying 380 linear feet, more or less, 10-inch pipe surface drain, including excavation and refill, 60c, linear foot. For placing 46 linear feet, more or less, 6-inch pipe chimneys 20c, linear foot. For relaying and reconnecting 6 linear feet, more or less, of existing drain in main trench 1c, linear foot. For relaying and reconnecting 10 linear feet, more or less, of existing drain outside of main trench, other than house and catch-basin drain, 1c, linear foot. 2 cubic yards, more or less, Class A concrete at \$3 cubic yard. 6 manholes, more or less, built on surface drain at \$35 each. 2 special manholes, more or less, on surface drain at \$40 each. 1 or more manhole inverts and walls rebuilt and connected with new sewer or drain at \$3 each. For furnishing earthenware pipe, single thick, estimated value of eleven hundred thirty-five dollars (\$1,135), 63 per cent from standard list prices. For furnishing earthenware pipe, double thick, estimated value of seventeen hundred seventy-five dollars (\$1,775), 60 per cent from standard list prices.	\$475 56	\$744 25
Malvern road, between Metropolitan avenue and Ethel street, West Roxbury.	Emilie De Christoforo*..... (9 bidders.)	Dec. 2, 1910.	2 cubic yards, more or less, earth excavation, below grade, other than for underdrain, at 75c, cubic yard.	\$475 56	\$744 25

<p>5 cubic yards, more or less, earth excavation, outside trenches at 50c. cubic yard.</p> <p>10 cubic yards, more or less, rock at \$3 cubic yard.</p> <p>1 cubic yard, more or less, gravel at 1c. cubic yard.</p> <p>1,000 feet, board measure, more or less, spruce sheeting at \$22 M. feet.</p> <p>For laying 50 linear feet, more or less, 6-inch pipe underdrain 1c. linear foot.</p> <p>For laying 400 linear feet, more or less, 8-inch pipe sewer, including excavation and refill, 74c. linear foot.</p> <p>For placing 20 linear feet, more or less, 6-inch pipe chimneys 12c. linear foot.</p> <p>2 cubic yards, more or less, Class A concrete at \$6 cubic yard.</p> <p>2 manholes, more or less, at \$38 each.</p> <p>1 or more existing manholes inverted, rebuilt and connected with new sewer or drain at \$5 each.</p> <p>For furnishing earthenware pipe, estimated value of three hundred dollars (\$300), 70 per cent from standard list prices.</p>	<p>No payment made.</p> <p>266 linear feet, more or less, earth excavation and refill, for 4-foot circular concrete con- duit at \$3 linear foot.</p> <p>10 cubic yards, more or less, earth excavation, below grade, other than for underdrain, at 50c. cubic yard.</p> <p>50 cubic yards, more or less, earth excavation outside trenches at 50c. cubic yard.</p> <p>100 cubic yards, more or less, rock at \$1 cubic yard.</p> <p>10 cubic yards, more or less, gravel at 1c. cubic yard.</p> <p>25,000 feet, board measure, more or less, spruce sheeting at \$15 M. feet.</p> <p>1,000 feet, board measure, more or less, spruce platforms, etc., at 1c. M. feet.</p> <p>For laying 2,500 linear feet, more or less, 6-inch pipe underdrain 15c. linear foot.</p>	<p>\$13,380 55</p>
<p>Dec. 6, 1910.</p> <p>Antony Cefalo*..... (9 bidders.)</p>	<p>Western avenue, between point 160 feet west of Everett and Market streets, Brighton.</p>	<p>of Everett and Market streets, Brighton.</p>

\* The contractor to furnish all the materials except the ironwork and cut stone.

## Sewer Contracts Awarded During 1910-11.—Continued.

CONTRACT.	Awarded to	Dated.	Price per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Western avenue, between point 160 feet west of Everett and Market streets, Brighton.	Antony Cefalo* . . . . . (9 bidders.)	Dec. 6, 1910.	For laying 1,000 linear feet, more or less, 8-inch pipe underdrain 20c. linear foot. 180 cubic yards, more or less, Class A concrete \$7 cubic yard. For laying 3,563 linear feet, more or less, 10-inch pipe sewer, including excavation and refill, \$1 linear foot. For laying 10 linear feet, more or less, 12-inch pipe sewer, including excavation and refill, \$1 linear foot. For laying 273 linear feet, more or less, 15-inch pipe sewer, including excavation and refill, \$1 linear foot. For laying 706 linear feet, more or less, 18-inch double thick pipe sewer, including excavation and refill, \$1 linear foot. For laying 282 linear feet, more or less, 20-inch double thick pipe sewer, including excavation and refill, \$1 linear foot. For laying 10 linear feet, more or less, 30-inch double thick pipe sewer, including excavation and refill, \$1 linear foot. For laying 40 linear feet, more or less, 10-inch pipe catch-basin drain, including excavation and refill, \$1 linear foot. For placing 190 linear feet, more or less, 6-inch pipe chimneys 15c. linear foot. For removing 266 linear feet, more or less, of existing sewer, including manholes, 10c. linear foot. For relaying and reconnecting 250 linear feet, more or less, of existing house drain in main trench 50c. linear foot. For relaying and reconnecting 30 linear feet, more or less, of existing catch-basin drain in main trench 50c. linear foot.		

For relaying and reconnecting 20 linear feet, more or less, of existing drain in main trench, other than house and catch-basin drain, 50c., linear foot.		
For placing 21, more or less, slants or connections in new masonry sewers or drains 50c., each.		
For laying and connecting 24 linear feet, more or less, 30-inch cast-iron pipe in main trench \$1 linear foot.		
27 manholes, more or less, built on sewer at \$40 each.		
2 manholes, more or less, built on surface drain at \$40 each.		
1 or more special manholes at \$50 each.		
For 2, more or less, connections between new and existing sewers or surface drains at \$25 each.		
For furnishing earthenware pipe, single thick, estimated value of five thousand two hundred fifty dollars (\$5,250), 70 per cent from standard list prices.		
For furnishing earthenware pipe, double thick, estimated value of two thousand one hundred dollars (\$2,100), 60 per cent from standard list prices.		
	\$923 45	\$1,551 50

Dec. 7, 1910.  
Luke D. Mullen\*.....  
(8 bidders.)

Lorotte street, between Centre street and Hill-  
crest street, West Roxbury.

5 cubic yards, more or less, earth excavation,  
below grade, other than for underdrain, at  
\$1 cubic yard.

5 cubic yards, more or less, earth excavation,  
outside trenches, at 45c, cubic yard.

25 cubic yards, more or less, rock excavation  
at \$4.30 cubic yard.

5 cubic yards, more or less, gravel at 60c, cubic  
yard.

5,000 feet, board measure, more or less, spruce  
sheeting at \$32 M. feet.

500 feet, board measure, more or less, spruce  
platforms, etc., at \$34 M. feet.

For laying 500 linear feet, more or less, 6-inch  
pipe underdrain 5c, linear foot.

\* The contractor to furnish all the materials except the ironwork and cut stone.

## Sewer Contracts Awarded During 1910-11.—Continued.

CONTRACT.	Awarded to	Dated.	Price per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Lorecite street, between Centre street and Hillcrest street, West Roxbury.	Luke D. Mullens*..... (8 bidders.)	Dec. 7, 1910.	For laying 510 linear feet, more or less, 10-inch pipe sewer, including excavation and refill, \$1.10 linear foot. For placing 20 linear feet, more or less, 6-inch pipe chimneys 15c. linear foot. For relaying and reconnecting, 10 linear feet, more or less, of existing drain in main trench, 5 20c. linear foot. 5 cubic yards, more or less, Class A concrete at \$6.10 cubic yard. 2 manholes, more or less, at \$47 each. For furnishing earthenware pipe, estimated value of six hundred and seventy-five dollars (\$675), 69 per cent from standard list prices.	\$1,278 05	\$1,261 58 Including extra work amounting to \$58 35
Clifton street, between Kittredge street and Albano street, West Roxbury.	Murphy & Dolan*..... (10 bidders.)	Dec. 7, 1910.	5 cubic yards, more or less, earth excavation, below grade, other than for underdrain, at 1c. cubic yard. 10 cubic yards, more or less, earth excavation, outside trenches, at 1c. cubic yard. 40 cubic yards, more or less, rock excavation at 1c. cubic yard. 5 cubic yards, more or less, gravel at 1c. cubic yard. 3,000 feet, board measure, more or less, spruce sheeting at 1c. M. feet. For laying 50 linear feet, more or less, 6-inch pipe underdrain 1c. linear foot. For laying 400 linear feet, more or less, 8-inch pipe sewer, including excavation and refill, \$1 linear foot. For laying 400 linear feet, more or less, 10-inch pipe surface drain, including excavation and refill, \$1.10 linear foot. For placing 18 linear feet, more or less, 6-inch pipe chimneys 15c. linear foot.		

For relaying and reconnecting 10 linear feet, more or less, of existing drain in main trench, 50c. linear foot.			
For placing 1 or more Y's in existing pipe sewers or drains \$3 each.			
1 cubic yard, more or less, Class A concrete at \$5 cubic yard.			
2 manholes, more or less, built on sewer at \$40 each.			
3 manholes, more or less, built on surface drain at \$33 each.			
1 or more existing manhole invert's rebuilt and connected with new sewer or drain at \$3 each.			
For furnishing earthware pipe, estimated value of six hundred and forty-five dollars (\$645), 72 per cent from standard list prices.			
		\$376.24	
Dee, 12, 1910. .... (6 bidders.)			
Luke D. Mulren*.....			
Norfolk street, between Blue Hill avenue and Fremont street, Worcester.			
For removing 55 linear feet, more or less, of existing sewer, including pipe chimneys, 15c. linear foot.			
For relaying and reconnecting 6 linear feet, more or less, of existing house drain in main trench, 35c. linear foot.			
		\$395.83	

\*\*\* The contractor to furnish all the materials except the ironwork and cut stone.

## Sewer Contracts Awarded During 1910-11.—Continued.

CONTRACT.	Awarded to	Dated.	Price per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Norfolk street, between Blue Hill avenue and Fremont street, Dorchester.	Luke D. Mullen* (6 bidders.)	Dec. 12, 1910.	For relaying and reconnecting 6 linear feet, more or less, of existing catch-basin drain in main trench, 35c. linear foot. For relaying and reconnecting 6 linear feet, more or less, of existing drain in main trench, other than house and catch-basin drain, 1c. linear foot. For relaying and reconnecting 6 linear feet, more or less, of existing house drain, outside of main trench, including excavation and refill, 65c. linear foot. For relaying and reconnecting 6 linear feet, more or less, of existing catch-basin drain, outside of main trench, including excavation and refill, 80c. linear foot. For relaying and reconnecting 6 linear feet, more or less, of existing drain, outside main trench, other than house and catch-basin drain, including excavation and refill, 65c. linear foot. 1 cubic yard, more or less, Class A concrete at \$4. cubic yard. 1 or more manholes at \$42 each. 1 or more existing manhole invert and walls rebuilt and connected with new sewer or drain at \$5 each. For furnishing earthenware pipe estimated value of two hundred ninety-four dollars (\$294), 68 per cent from standard list prices.		Final payment not made.
Arbutus street, between Ashton street and Blue Hill avenue, Dorchester.	Luke D. Mullen* (6 bidders.)	Dec. 12, 1910.	2 cubic yards, more or less, earth excavation, below grade, other than for underdrain, at 1c. cubic yard. 2 cubic yards, more or less, earth excavation, outside trenches, at 1c. cubic yard. 50 cubic yards, more or less, rock excavation at \$3 cubic yard.	\$821 50	

2 cubic yards, more or less, gravel at 1c. eubic yard.				
1,000 feet, board measure, more or less, spruce sheeting at 1c. M. feet.				
For laying 380 linear feet, more or less, 8-inch pipe sewer, including excavation and refill, 9c. linear foot.				
For removing 14 linear feet, more or less, of existing sewer, 1.5c. linear foot.				
For relaying and reconnecting 6 linear feet, more or less, of existing house drain in main trench, 3c. linear foot.				
For relaying and reconnecting 6 linear feet, more or less, of existing drain in main trench, other than house and catch basin drain, 1.5c. linear foot.				
For relaying and reconnecting 10 linear feet, more or less, of existing house drain, outside of main trench, including excavation and refill, 6c. linear foot.				
For relaying and reconnecting 10 linear feet, more or less, of existing drain, outside of main trench, other than house and catch basin drain, including excavation and refill, 5c. linear foot.				
2 cubic yards, more or less, Class A concrete at \$5 cubic yard.				
4 manholes, more or less, at \$42 each.				
For furnishing earthenware pipe, estimated value of one hundred forty-five dollars (\$145), 68 per cent from standard list prices.				
5 cubic yards, more or less, earth excavation, below grade, other than for underdrain, at 1c eubic yard.				
10 cubic yards, more or less, earth excavation, outside trenches, at 1c. cubic yard.				
25 cubic yards, more or less, rock at \$3 cubic yard.				
5 cubic yards, more or less, gravel at 1c cubic yard.				
2,000 feet, board measure, more or less, spruce sheeting at 1c. M. feet.				
Luke D. Mullens*..... (7 bidders)	Dec. 12, 1910.			
Dyer street, between Capen and Evans streets, and Ufford street, between Norfolk and Dyer streets, Dorchester.				

\$2,490 12  
Final payment not made.

\* The contractor to furnish all the materials except the ironwork and cut stone.

## Sewer Contracts Awarded During 1910-11.—Continued.

CONTRACT.	Awarded to	Dated.	Price per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Dyer street, between Capen and Evans streets, and Ufford street, between Norfolk and Dyer streets, Dorchester.	Luke D. Mullen* (7 bidders.)	Dec. 12, 1910.	1,000 feet, board measure, more or less, spruce platforms, etc., at 1c. M. Feet. For laying 100 linear feet, more or less, 6-inch pipe underdrain 1c. linear foot. For laying 197 linear feet, more or less, 12-inch pipe sewer in Dyer street, including excavation and refill, 80c. linear foot. For laying 371 linear feet, more or less, 8-inch pipe sewer in Dyer street, including excavation and refill, 63c. linear foot. For laying 280 linear feet, more or less, 8-inch pipe sewer in Ufford street, including excavation and refill, 70c. linear foot. For laying 187 linear feet, more or less, 12-inch pipe surface drain in Dyer street, including excavation and refill, 50c. linear foot. For laying 288 linear feet, more or less, 10-inch pipe surface drain in Dyer street, including excavation and refill, 75c. linear foot. For laying 295 linear feet, more or less, 10-inch pipe surface drain in Ufford street, including excavation and refill, 65c. linear foot. For laying 50 linear feet, more or less, 6-inch pipe house drain, including excavation and refill, 40c. linear foot. For removing 20 linear feet, more or less, of existing sewer or drain at 10c. linear foot. For relaying and reconnecting 10 linear feet, more or less, of existing house drain in main trench 20c. linear foot. For relaying and reconnecting 10 linear feet, more or less, of existing drain in main trench, other than house and catch-basin drain, 1c. linear foot.		

<p>For relaying and reconnecting 20 linear feet, more or less, of existing house drain, outside of main trench, including excavation and refill, 60c. linear foot.</p> <p>For relaying and reconnecting 10 linear feet, more or less, of existing drain, outside of main trench, other than house and catch-basin drain, including excavation and refill, 1c. linear foot.</p> <p>For placing 1 or more Y's in existing pipe sewers or drains \$5 each.</p> <p>5 cubic yards, more or less, Class A concrete at \$5.60 cubic yard,</p> <p>5 manholes, more or less, built on pipe sewer, at \$47 each.</p> <p>6 manholes, more or less, built on pipe surface drain, at \$33 each.</p> <p>1 or more existing manhole invert and walls rebuilt, and connected with new sewer or drain, at \$3 each.</p> <p>For furnishing earthenware pipe, estimated value of fourteen hundred eleven dollars (\$1,411), at 68 per cent from standard list prices.</p>	<p>Final payment not made.</p> <p>1 cubic yard, more or less, earth excavation, below grade, other than for underdrain, at 1c. cubic yard.</p> <p>1 cubic yard, more or less, earth excavation, outside trenches, at 1c. cubic yard.</p> <p>25 cubic yards, more or less, rock at 1c. cubic yard.</p> <p>1 cubic yard, more or less, gravel at 1c. cubic yard.</p> <p>100 feet, board measure, more or less, spruce sheeting at 1c. M. feet.</p> <p>For laying 582 linear feet, more or less, 10-inch pipe sewer, including excavation and refill, 77c. linear foot.</p> <p>For placing 1 or more 15-inch by 10-inch Y's in existing pipe sewers or drains \$2 each.</p> <p>1 cubic yard, more or less, Class B concrete at \$5 cubic yard.</p>
Dec. 12, 1910.	Dan Di Pietro*..... (7 bidders.)
Mallon road between Rossiter street and Bowdoin avenue, Dorchester.	

\* The contractor to furnish all the materials except the ironwork and cut stone.

## Sewer Contracts Awarded During 1910-11.—Continued.

CONTRACT.	Awarded to	Dated.	Price per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Mallon road, between Rossette street and Bowdoin avenue, Dorchester.	Dan Di Pietro* (7 bidders.)	Dec. 12, 1910.	4 manholes, more or less, at \$38 each. 1 cubic yard, more or less, of other brick masonry at \$12.50 cubic yard. For furnishing earthenware pipe, estimated value of five hundred forty dollars (\$540), 70 per cent from standard list prices.	\$4,065 60	Final payment not made.
Willow street, between Railroad and Centre streets, and Centre street, between Maple and Beech streets, West Roxbury.	West Roxbury Trap Rock Company.* (2 bidders.)	Dec. 15, 1910.	55 cubic yards, more or less earth excavation, below grade, other than for underdrain, at \$1.50 cubic yard. 10 cubic yards, more or less, earth excavation, outside trenches, at \$1 cubic yard. 150 cubic yards, more or less, rock at \$1 cubic yard. 60 cubic yards, more or less, gravel at 50c. cubic yard. 10,000 feet, board measure, more or less, spruce sheeting at \$20 M. feet. 1,000 feet, board measure, more or less, spruce platforms, etc., at \$30 M. feet. For laying 800 linear feet, more or less, 6-inch pipe underdrain 25c. linear foot. For laying 450 linear feet, more or less, 10-inch pipe sewer in Willow street, including excavation and refill, \$1.10 linear foot. For laying 452 linear feet, more or less, 10-inch pipe sewer, Centre street, between Willow and Maple streets, including excavation and refill, \$1.10 linear foot. For laying 350 linear feet, more or less, 10-inch pipe sewer in Centre street, between Willow and Beech streets, including excavation and refill, \$1.10 linear foot. For laying 195 linear feet, more or less, 8-inch pipe sewer in Centre street, between Willow and Beech streets, including excavation and refill, \$1.10 linear foot.		

For placing 78 linear feet, more or less, 6-inch pipe chimneys 20c. linear foot.			
For relaying and reconnecting 20 linear feet, more or less, of existing drain in main trench \$1 linear foot.			
For placing 1 or more slants or connections in existing masonry sewers or drains \$5 each, 10 cubic yards, more or less, Class A concrete at \$5 cubic yard.			
8 manholes, more or less, at \$35 each.			
For furnishing earthenware pipe, estimated value of sixteen hundred dollars (\$1,600), 60 per cent from standard list prices.			
		No payment made.	
10 cubic yards, more or less earth excavation, below grade, other than for underdrain or pump wells, at 00c. cubic yard.			
20 cubic yards, more or less earth excavation, outside trenches, 00c. cubic yard.			
25 cubic yards, more or less, rock at 00c. cubic yard.			
5 cubic yards, more or less, gravel at 00c. cubic yard.			
10,000 feet, board measure, spruce sheeting at 000c. M. feet.			
500 feet, board measure, spruce platforms at 00c. M. feet.			
For laying 200 linear feet, more or less, 6-inch pipe underdrain 00c. linear foot.			
For laying 220 linear feet, more or less, 24-inch pipe, double strength, surface drain, including excavation and refill, 70c. linear foot.			
For laying 625 linear feet, more or less, 20-inch pipe, double strength, surface drain, including excavation and refill, 70c. linear foot.			
For laying 365 linear feet, more or less, 18-inch pipe surface drain, including excavation and refill, 70c. linear foot.			
For laying 137 linear feet, more or less, 12-inch pipe surface drain, including excavation and refill, 65c. linear foot.			

Litchfield street, between Western avenue and Lincoln street, Brighton.  
Charles J. Jacobs Company\*... Dec. 24, 1910.  
(6 bidders.)

\*The contractor to furnish all the materials except the ironwork and cut stone.

## Sewer Contracts Awarded During 1910-11.—Concluded.

CONTRACT.	Awarded to	Dated. b	Price per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Litchfield street, between Western avenue and Lincoln street, Brighton.	Charles J. Jacobs Company*... (6 bidders.)	Dec. 21, 1910.	For laying 160 linear feet, more or less, 10-inch pipe catch-basin drain, including excavation and refill, 40c. linear foot. For relaying and reconnecting 100 linear feet, more or less, of existing drain in main trench, 20c. linear foot. 5 cubic yards, more or less, Class A concrete at 00 cubic yards. 7 manholes, more or less, at \$30 each. 14 catch-basins, more or less, at \$55 each. For furnishing earthenware pipe, single strength, estimated value of twelve hundred fifty dollars (\$1,250), 72 per cent from standard list prices. For furnishing earthenware pipe, double strength, estimated value of twenty-four hundred twenty-five dollars (\$2,425), 70 per cent from standard list prices.		

\* The contractor to furnish all the materials except the ironwork and cut stone.

## Pile=Driving Contract Awarded, 1910-11.

CONTRACT.	Awarded to	Dated.	Price per Item.
Vila street, extension between Fenway and Longwood avenue, Roxbury.	Rendle & Stoddard..... (3 bidders.)	Mar. 10, 1910.	Furnishing and driving spruce piles, at 14c. linear foot of pile.
Wales street, between Talbot avenue and Harvard street, Dorchester.	Rendle & Stoddard..... (3 bidders.)	Jan. 23, 1911.	Furnishing and driving spruce piles, at 12c. linear foot of pile, not exceeding 40 feet in length; for each linear foot pile over 40 feet in length, at 14c.

## Contracts for Cleaning Sewers Awarded, 1910-11.

CONTRACT.	Awarded to	Dated.	Price per Linear Foot.	Amount Paid to Contractor.
Chadwick street, between Hampden street and Yeoman street, and Yeoman street, between Albany street and Chadwick street, Roxbury, Webster street, between Harrison avenue and Albany street, Roxbury .	Richard A. Nagle.....	Feb. 11, 1910.	11c. linear foot.....	
Stony brook valley sewer, between Boylston street and manhole, about 2,129 feet north, West Roxbury.	Richard A. Nagle.....	Feb. 11, 1910.	10½c. linear foot.....	
Hyde Park avenue, from Forest Hills Elevated Station to Walk Hill street, West Roxbury.	Richard A. Nagle.....	Feb. 11, 1910.	12c. linear foot.....	
Poplar street, between Washington street and Clarendon park, West Roxbury.	Richard A. Nagle.....	Feb. 11, 1910.	10c. linear foot.....	\$886 24
Florence street, from No. 121 to Sherwood street, and Sycamore street, between Florence and Ridge streets and extension, in private land, between Florence street and siphon manhole, West Roxbury.	Richard A. Nagle .....	Feb. 11, 1910.	9½c. linear foot.....	
St. Stephens street, between Massachusetts avenue and Bryant street, Roxbury.	Richard A. Nagle .....	Feb. 11, 1910.	11c. linear foot.....	
Buckingham street, between Dartmouth street and Columbus avenue, city proper.	Harris C. Porter, Jr. ....	Feb. 9, 1910.	11c. linear foot.....	78 21
Dorchester avenue, between Linden and Kimball streets, Dorchester..	Montague C. Muncey.....	April 21, 1910.	20c. linear foot.....	
Winthrop street, between Dennis street and Blue Hill avenue, Roxbury, Massachusetts avenue, from Shirley street, about 262 feet easterly, Roxbury.	Montague C. Muncey.....	April 21, 1910.	15c. linear foot.....	
Commercial street, between Hanover and Battery streets, city proper..	Montague C. Muncey.....	April 21, 1910.	30c. linear foot.....	
Dobbs alley, between 60 Fulton street and 139 North street, city proper.	Montague C. Muncey.....	April 21, 1910.	20c. linear foot.....	Final payment not made.
Richmond street, between Fulton and Commercial street, city proper..	Montague C. Muncey.....	April 21, 1910.	40c. linear foot.....	
Nashua street, between Causeway and Minot streets, city proper.....	Montague C. Muncey.....	April 21, 1910.	40c. linear foot.....	
Chair alley, between Cross and Richmond streets, city proper.....	Montague C. Muncey.....	April 21, 1910.	75c. linear foot.....	

## Contracts for Cleaning Sewers Awarded, 1910-11.—Concluded.

CONTRACT.	Awarded to	Dated.	Price per Linear Foot.	Amount Paid to Contractor.
Talbot avenue, between Blue Hill avenue and Bernard street, Dorchester.	James L. Pierce .....	May 6, 1910.	14½c. linear foot.....	\$502 45
Ashland street, between Washington and Sycamore streets, West Roxbury.	James L. Pierce .....	May 6, 1910.	16c. linear foot.....	
Portland street, between Hanover and Market streets, city proper.....	James L. Pierce .....	June 9, 1910.	\$1.31 linear foot.....	1,125 29
Commercial street, between Battery and Clark streets, city proper....	James L. Pierce & Co. ....	July 28, 1910.	32½c. linear foot.....	
Prince street, between Salem and Snow Hill streets, city proper.....	James L. Pierce & Co. ....	July 28, 1910.	24c. linear foot.....	
Brooks street, between Florence and Ridge streets, West Roxbury....	James L. Pierce & Co. ....	July 28, 1910.	23c. linear foot.....	455 13
Marion street, from Florence street to a point 412 feet north, West Roxbury.	James L. Pierce & Co. ....	July 28, 1910.	24c. linear foot.....	
Harrison street, from Florence street to manhole 574 feet north, West Roxbury.	Richard A. Nagle.....	July 28, 1910.	32c. linear foot.....	183 68
Canterbury branch of Stony brook in Hansborough street and private land, between Harvard and Don streets, Dorchester.	James L. Pierce & Co. ....	Aug. 24, 1910.	69c. linear foot.....	
Market street, between Portland and Canal streets, and Canal street, between Market and Traverse streets, city proper.	James L. Pierce & Co. ....	Aug. 24, 1910.	54c. linear foot.....	2,391 63
Canal street relief sewer in Canal, Haverhill, Charlestown, Stillman, Endicott and Cross streets, and private land, between Canal and Hanover streets, city proper.	James L. Pierce & Co. ....	Aug. 24, 1910.	50c. linear foot.....	
Beverly street, city proper. (Not advertised) .....	James L. Pierce & Co. ....	Aug. 9, 1910.	49c. linear foot.....	242 08
Canal street, between Traverse and Causeway streets, and Traverse street, between Canal and Portland streets, city proper.	Richard A. Nagle.....	Nov. 2, 1910.	73c. linear foot.....	
Canal street, between Market and Sudbury streets, city proper.....	Richard A. Nagle.....	Nov. 2, 1910.	73c. linear foot.....	
Huntington avenue, between Calumet and Wait streets, Roxbury.....	Richard A. Nagle.....	Nov. 2, 1910.	80c. linear foot.....	
Huntington avenue, between Brookline line and South Huntington avenue, Roxbury.	Richard A. Nagle.....	Nov. 2, 1910.	50c. linear foot.....	

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Tenecan creek conduit in private land and Freeman street, between Mill street and 428 feet north of Park street, and Gibson street branch between Park and Gibson streets, Dorchester.	James H. Ferguson, . . . . .	Nov. 8, 1910.	\$1.11 linear foot . . . . .	Final payment not made.
Commerce street, from Commercial street sewer 329 feet east, city proper.	James L. Pierce & Co., . . . . .	Jan. 3, 1911.	91e. linear foot . . . . .	
St. Stephens street, from manhole near Opera place, to manhole about 269 feet south.	James L. Pierce & Co., . . . . .	Jan. 3, 1911.	\$1.24 linear foot . . . . .	Final payment not made.
Winthrop street, from Blue Hill avenue towards Fairland street, about 565.2 feet, Roxbury.	Richard A. Nagle, . . . . .	Jan. 13, 1911.	48c. linear foot . . . . .	
Tremont street, between Roxbury Crossing and Linden Park street, Roxbury.	Richard A. Nagle, . . . . .	Jan. 13, 1911.	58c. linear foot . . . . .	Final payment not made.
Public Alley No. 44, from Hereford street, about 560 feet westerly, city proper.	James L. Pierce & Co., . . . . .	Jan. 14, 1911.	32c. linear foot . . . . .	
South Huntington avenue, between Huntington avenue and Colburn street, Roxbury.	James L. Pierce & Co., . . . . .	Jan. 14, 1911.	70c. linear foot . . . . .	Final payment not made.
Lansdowne street, between Brookline avenue and Ipswich street, Roxbury.	James L. Pierce & Co., . . . . .	Jan. 14, 1911.	63c. linear foot . . . . .	
Blossom street, between Cambridge and Parkman streets, city proper . . .	James L. Pierce & Co., . . . . .	Jan. 16, 1911.	\$1.06 linear foot . . . . .	\$423 52
Cross street, between Haymarket square and Endicott street, city proper.	A. De Stefano, . . . . .	Jan. 23, 1911.	57c. linear foot . . . . .	
Richmond street, between Fulton and Commercial streets, city proper . . .	A. De Stefano, . . . . .	Jan. 23, 1911.	68c. linear foot . . . . .	Final payment not made.
Public Alley No. 101 (formerly Chair alley, between Cross and Richmond streets, city proper . . . . .	A. De Stefano, . . . . .	Jan. 23, 1911.	45c. linear foot . . . . .	

## Contracts for Cleaning Catch-Basins Awarded, 1910-11.

CONTRACT.	Awarded to	Dated.	Price per Item.
South Boston, District No. 1.....	Richard A. Nagle.....	Feb. 4, 1910.	Cleaning 500 catch-basins, about 1,650 cubic yards at 95c. cubic yard.
East Boston, District No. 2 .....	Richard A. Nagle.....	Feb. 4, 1910.	Cleaning 500 catch-basins, about 1,650 cubic yards, at \$1.07 cubic yard.
Charlestown, District No. 3.....	Richard A. Nagle.....	Feb. 4, 1910.	Cleaning 500 catch-basins, about 1,650 cubic yards, at \$1.06 cubic yard.
Roxbury and City Proper, Districts Nos. 7 and 8.....	Richard A. Nagle.....	Feb. 4, 1910.	Cleaning 1,500 catch-basins, about 5,000 cubic yards, at 95c. cubic yard.
Brighton District, No. 4.....	Joseph McGreevey.....	Feb. 4, 1910.	Cleaning 500 catch-basins, about 1,650 cubic yards, at 89c. cubic yard.
West Roxbury District, No. 5.....	Thomas F. Carroll.....	Feb. 4, 1910.	Cleaning 500 catch-basins, about 1,650 cubic yards, at 87c. cubic yard.
Dorchester District, No. 6.....	Thomas F. Carroll.....	Feb. 4, 1910.	Cleaning 1,000 catch-basins, about 3,300 cubic yards, at 87c. cubic yard.
City Proper, Districts Nos. 9 and 10.....	John W. Collins.....	Feb. 4, 1910.	Cleaning 1,000 catch-basins, about 3,300 cubic yards, at \$1.15 cubic yard.

## Miscellaneous Contracts Awarded, 1910-11.

CONTRACT.	Awarded to	Dated.	Price.
Floor gratings for gatehouse at Moon Island.....	George T. McLaughlin Company .....	Feb. 10, 1910.	\$234 00
Furnishing ten $\frac{3}{4}$ -inch four-way valves at Moon Island.....	Coffin Valve Company .....	Feb. 10, 1910.	110 00
Raising sludge scow sunk at her berth at the Calf Pasture pumping station.....	Alfred Sorenson .....	Mar. 17, 1910.	325 00
Making and fitting composition sleeve for pump plunger rod on No. 2 Worthington pump at the Calf Pasture pumping station.	The Lockwood Manufacturing Company .....	Mar. 18, 1910.	87 00
Gutters on shaft house and conductors on sludge house at the Calf Pasture pumping station.	E. Van Noorden Company .....	May 23, 1910.	210 00
Furnishing, delivering and installing five sluice gates and compressed air rams at Moon Island.	Coffin Valve Company .....	June 16, 1910.	3,300 00
Repairing crank shaft on No. 4 pumping engine at the Calf Pasture pumping station.	The Lockwood Manufacturing Company .....	July 12, 1910.	1,013 76
Installing one 15-inch drum with two 7-inch riveted nozzles at the Calf Pasture pumping station.	The Lumsden & Van Stone Company .....	Sept. 8, 1910.	450 00
Furnishing one condenser jet nozzle, etc., for pumping engine No. 5 at the Calf Pasture pumping station.	The Lockwood Manufacturing Company .....	Sept. 23, 1910.	200 00
Furnishing, delivering and erecting two steam turbine centrifugal pumps at the Calf Pasture pumping station.	The Power Equipment Company .....	Oct. 27, 1910.	36,063 00
Installing sluice gate at the Calf Pasture pumping station.....	Coffin Valve Company .....	Nov. 16, 1910.	543 00
Repairs and renewals to sludge dumping scow at the Calf Pasture pumping station.	Richard T. Green Company .....	Dec. 15, 1910.	1,997 00
Hoisting granite out of pit at the Calf Pasture pumping station.....	M. J. Connelly .....	Jan. 6, 1911.	200 00
Taking down and removing the old garbage incinerator building at the Calf Pasture pumping station.	John B. Leake .....	Nov. 1, 1910.	200 00
The sale of one of the two old Worthington pumps at the Calf Pasture pumping station.	The Power Equipment Company .....	Dec. 14, 1910.	*1,400 00

\*Paid to city.

## Miscellaneous Contracts Awarded, 1910-11.—Concluded.

CONTRACT.	Awarded to	Dated,	Number Feet Centers,	Size.	Shape.	Amount Paid.
Rental of collapsible steel centers.....	Blaw Collapsible Steel Centering Company..	May 31, 1910.	40	40 inch.	Half round forms.	\$90 00

CONTRACT.	Awarded to	Dated.	Rate.
Automobile insurance (Overland car).....	Boston Insurance Company.....	Mar. 13, 1910, to Mar. 13, 1911.	\$57 50
Automobile insurance (Reo car).....	The Travelers Insurance Company .....	Sept. 10, 1910, to Sept. 10, 1911.	61 50
Automobile insurance (Stevens-Duryea car).....	The Travelers Insurance Company .....	Sept. 10, 1910, to Sept. 10, 1911.	83 75
Employees and public liability insurance improved sewerage.....	The Travelers Insurance Company .....	June 13, 1910, to June 13, 1911.	*\$80.50 per \$100 of wages. +\$37.50 per \$100 of wages.
Removing buildings on Tower street, West Roxbury, on the line of Stony brook conduit, section 7.	Soley & Blair, Inc.....	July 1, 1910.	\$335 00

\* Employees rate.

† Public rate.

	Dated.
Agreement with New York, New Haven & Hartford Railroad in relation to constructing Roslindale branch of Stony brook conduit, between Belgrade avenue and Anawan avenue, West Roxbury.	Feb. 11, 1910.
Agreement with New York, New Haven & Hartford Railroad in relation to constructing surface drain under tracks 110 feet north of Harvard street, Dorchester.	
	Dated.
Agreement with Neil McNeil for the right of way during the building of Kimball street outlet, Dorchester. ....	Aug. 30, 1910.
	\$275 00

## APPENDIX F.

REPORT OF THE COMMISSIONER FOR THE  
BOSTON AND CAMBRIDGE BRIDGES.

BOSTON, January 31, 1911.

HON. JOHN F. FITZGERALD,

*Mayor of the City of Boston:*

SIR,—As commissioner for the City of Boston I respectfully submit herewith the annual report of the Boston and Cambridge Bridge Commission.

This commission is composed of two members, one appointed by the Mayor of the City of Boston, the other by the Mayor of the City of Cambridge, under the provisions of chapter 467, Acts of 1898. This commission has charge of the care and maintenance of the following-named bridges, connecting the cities of Boston and Cambridge: Cambridge-River Street, Essex-Brookline Street, North Harvard-Boylston Street, Prison Point, Cambridge, Harvard and Western Avenue.

As there was no specific appropriation made by the City of Boston for its portion of the expense of the commission during the past year, the amount expended was taken from the appropriation for Street Department, Highway Division, and amounted to \$22,006.57.

Besides the necessary patching and small repairs required on these bridges from time to time, the following work was done:

*Prison Point.*—This bridge has been replanked during the past year, and will need still more planking the coming year. New headers should be placed on this bridge at once.

The drawtenders' house is in very poor condition and should be replaced by a new structure.

*Cambridge Bridge.*—This bridge is in reasonably good condition, but will need considerable painting this year.

*Harvard Bridge.*—During the past year extensive repairs have been made on the pavement. The piers have been replanked and are now in good condition. Considerable more paving will be needed this year. During the past two years we have recommended the painting of the bridge. It has now reached such a stage that it is absolutely necessary to begin at once on this work. It is badly rusted.

*Brookline Street.*— This bridge has been entirely replanked during the past year. It will require painting this year and considerable replanking.

*River Street.*— This bridge has been rebuilt entire.

*Western Avenue.*— This bridge was entirely rebuilt last year, so that little has been done on it this year. The roadway needs new sheathing.

*Boylston Street.*— During the past year considerable repairs have been made on this bridge and unless immediate steps are taken to replace this old structure with a new one extensive repairs will be necessary.

The following is an estimate of the expense of making the repairs which will be necessary during the year 1911-12:

<i>Brookline Street Bridge.</i> — General work	\$300
<i>Cambridge Bridge.</i> — Patch painting under central curbs	1,000
<i>Cambridge-River Street Bridge.</i> — Sheathe (in fall), plank one pier, repair corner of pier and waterway, new boat	1,100
<i>Harvard Bridge.</i> — Paint entire bridge and miscellaneous repairs, not including repairing of roadway, which is provided for under contract with the U. S. Wood Preserving Company	8,500
<i>North Harvard Street Bridge.</i> — Adjust draw; general overhauling, including many new piles	2,200
<i>Prison Point Bridge.</i> — New drawtenders' house, paint bridge, rebuild part of pier, sheathe draw	4,000
<i>Western Avenue Bridge.</i> — Adjust draw, plank one pier, new piling at corner of pier, repair fender guard and waterway, sheathe (half in spring, half in fall)	900
General supplies	3,000
Total estimated cost to both cities	<u>\$21,000</u>
City of Boston, one-half	<u>\$10,500</u>

The income for the year 1910-11 amounted to \$15.72, same being one-half the amount received from the sale of sundry lots of junk from the various bridges.

Tables are appended showing the distribution of the expenses of the commission for the year and a statement of the draw openings.

Respectfully submitted,

L. K. ROURKE,  
Commissioner for the City of Boston.

## Expenditures for Year 1901.

	Clerical Services.	Inspection.	Printing, Postage, Advertising and Fares, etc.	Salaries of Draw-tenders and Caretakers.	Roadway and General Repairs and Supplies.	Lighting.	Fuel.	Lumber.	Totals.
Administration and office expenses.....	\$249 98	\$502 00	\$97 31	\$1,421 65	\$113 11	\$1,686 72	.....	.....	\$849 29
Cambridge Bridge.....	.....	.....	.....	863 46	3,236 50	45 00	\$9 97	\$28 33	3,221 48
Cambridge-River Street Bridge.....	.....	.....	.....	2,624 04	1,259 76	875 06	23 14	237 10	4,183 26
Harvard Bridge.....	.....	.....	.....	.....	287 21	235 81	.....	566 96	1,089 98
Essex-Brookline Street Bridge.....	.....	.....	.....	834 54	229 99	.....	.....	204 81	1,273 34
North Harvard-Brookline Street Bridge.....	.....	.....	.....	2,627 66	375 09	.....	5 89	262 99	3,271 63
Prison Point Bridge.....	.....	.....	.....	863 47	2,112 86	45 00	.....	77 16	3,098 49
Western Avenue Bridge.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<b>Totals.....</b>	<b>\$249 98</b>	<b>\$502 00</b>	<b>\$97 31</b>	<b>\$9,238 82</b>	<b>\$7,614 52</b>	<b>\$2,887 59</b>	<b>\$39 00</b>	<b>\$1,377 35</b>	<b>\$22,006 57</b>

Boston and Cambridge Bridges.

*Draw Openings, February 1, 1910, to January 31, 1911, Inclusive.*

CAMBRIDGE BRIDGE DIVISION.

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	CAMBRIDGE STREET.		HARVARD.		PRISON POINT.		NORTH HARVARD STREET.		WESTERN AVENUE.	
	Number of Openings.	Number of Vessels.	Number of Openings.	Number of Vessels.	Number of Openings.	Number of Vessels.	Number of Openings.	Number of Vessels.	Number of Openings.	Number of Vessels.
<b>1910.</b>										
February.....	1	1	.....	.....	20	38	1	1	1	1
March.....	5	9	15	21	12	24	5	9	5	9
April.....	15	29	53	79	13	27	15	29	15	29
May.....	13	29	39	67	30	61	9	22	9	22
June.....	20	37	45	66	35	75	12	22	" 12	22
July.....	30	50	50	78	18	29	14	21	14	21
August....	8	12	24	33	7	17	3	4	7	10
September.....	11	16	39	54	30	52	13	19	13	19
October..	29	52	49	81	27	49	12	22	12	22
November.....	24	77	55	85	18	29	4	10	14	60
December.....	4	7	54	60	24	47				
<b>1911.</b>										
January.....	.....	.....	20	24	16	28				
Totals.....	160	319	443	648	250	476	88	159	102	215

## APPENDIX G.

## REPORT OF CIVIL SERVICE CLERK.

February 1, 1911.

MR. L. K. ROURKE,

*Superintendent of Streets:*

DEAR SIR,—I submit herewith a report of the work performed in connection with the Civil Service Commission for the year ending January 31, 1911:

Requisitions made . . . . .	58
Requisitions canceled . . . . .	2
Certifications returned, no selection made . . . . .	9
Number of men called . . . . .	205
Number of men certified . . . . .	386
Number of men appointed . . . . .	184
Number of men appointed provisionally . . . . .	13
Provisional appointments made permanent . . . . .	13
Applications made for promotion . . . . .	11
Promotions allowed . . . . .	7
Promotions allowed provisionally . . . . .	4
Requests for permission to reinstate . . . . .	32
Requests for permission to reinstate allowed . . . . .	15
Requests for permission to reinstate not allowed . . . . .	17
Number of men resigned through absence . . . . .	39
Number of men resigned through absence reinstated . . . . .	22
Number of men reported to the Civil Service Commission as not having worked for more than six months . . . . .	48
Number of men resigned . . . . .	8
Number of men died . . . . .	81
Number of men discharged . . . . .	29
Number of transfers made from other departments . . . . .	6
Number of transfers made to other departments . . . . .	7

## Grade and Number of Employees.

TITLE.	DIVISIONS.								Total.
	Central Office.	Paving.	Sewer.	Sanitary.	Street Cleaning.	Ferry.	Bridge.	Lamp.	
Superintendent.....	1								1
Deputies.....		1	1	1		1		1	5
Clerks .....	6	29	18	8	4	2	2	1	70
Messengers.....	2	2	1	1	1		1	1	9
Chief engineers (civil).....		1	1						2
Assistant engineers (civil).....		3	20						23
Draughtsmen.....				12					12
Instrumentmen.....				8					8
Rodmen .....		1	23						24
Axemen.....		2							2
Inspectors.....		39	50	44	24			4	161
Foremen.....		9	8	6	9				32
Subforemen.....		43	4		12		3		62
Blacksmiths and assistants.....		7	4	13					24
Blanket repairer.....					1				1
Boilermakers and assistants.....						2			2
Bracers and assistants.....			28						28
Blueprinter.....				1					1
Boy .....						1			1
Chauffeurs.....	1	1	2	1					5
Carpenters and assistants.....		15	9	4		2	8		38
Chief inspector.....				1					1
Cement testers.....				2					2
Coal passers.....				8					8
Coshier.....							1		1
Drawtenders and assistants.....							141		141
Drivers.....							1		1
Deckhands.....				3		24			27
Dumpers.....				27					27
Engineer (steam).....		10	16						26
Engineer (marine).....				1		13			14
Engineer of bridges.....							1		1
<i>Carried forward.....</i>	10	163	217	110	51	45	157	7	760

## Grade and Number of Employees.—Continued.

TITLE.	DIVISIONS.								Total.
	Central Office.	Paving.	Sewer.	Sanitary.	Street Cleaning.	Ferry.	Bridge.	Lamp.	
Brought forward.....	10	163	217	110	51	45	157	7	760
Electricians.....		1	1	.....		1	1	.....	4
Filth-hoist men.....			4	.....					4
Firemen.....			8	2	2	39	.....		51
Gatemen.....			4	.....		15	.....		19
Harnessmakers and assistants.....				6	.....				6
Horseshoers.....				8	.....				8
Hostlers.....			11	.....					11
Janitors.....		3	.....	.....		5	1	.....	9
Janitresses.....				.....		6	.....		6
Joiners.....				.....		3	.....		3
Laborers and helpers.....	376	296	235	280	12	4	.....		1,203
Lamplighters.....				.....		2	1	.....	3
Machinists and assistants.....			5	.....			1	.....	6
Mate.....				1	.....				1
Masons (stone and brick).....		10	.....	.....					10
Oilers.....		13	.....	.....	10	.....			23
Pavers and assistants.....	67	.....	.....	.....					67
Painters.....	3	.....	9	.....	1	4	.....		17
Pilots.....				1	.....	12	.....		13
Quartermasters.....				.....		12	.....		12
Roofer.....				.....			1	.....	1
Rigger.....				.....			1	.....	1
Sewer flushers.....		2	.....	.....					2
Supervisor of construction.....				.....			1	.....	1
Steamfitter.....				.....			1	.....	1
Stenographers.....		1	2	.....				1	4
Stonecutters.....	15	1	.....	.....					16
Superintendent main drainage.....			1	.....					1
Storekeeper.....			1	.....					1
Stockkeeper.....				1	.....		1	.....	2
Scowmen.....				2	.....				2
Stablemen.....		23	.....	38	19	.....	1	.....	81
Carried forward.....	10	652	576	413	352	167	170	9	2,349

Grade and Number of Employees.—*Concluded.*

TITLE.	DIVISIONS.								
	Central Office.	Paving.	Sewer.	Sanitary.	Street Cleaning.	Ferry.	Bridge.	Lamp.	Total.
Brought forward.....	10	652	576	413	352	167	170	9	2,349
Sweeping machine drivers.....					28				28
Teamsters.....		76	28	224	68		3		399
Tollmen.....						12			12
Watchmen.....		32	24	10	7		4	1	78
Weighers and assistants.....		3		2					5
Wharfingers and assistants.....		1		1					2
Wheelwrights and assistants.....				5					5
Yardmen.....		5	8	10					23
Totals.....	10	769	636	665	455	179	177	10	2,901

## Comparative Table Showing the Number of Employees February 1, 1910, and February 1, 1911.

	Central Office.	Bridge.	Ferry.	Lamp.	Paving.	Sanitary.	Sewer.	Street Cleaning and Watering.	Totsl.
February 1, 1910.....	10	175	160	10	776	587	617	425	2,760
February 1, 1911.....	10	177	179	10	769	665	636	455	2,901

Respectfully submitted,

DANIEL R. MURRAY,  
*Civil Service Clerk.*

## APPENDIX H.

## FORMER SUPERINTENDENTS AND DOCUMENT NUMBERS OF ANNUAL REPORTS.

## Bridge Department Before 1891.

*Previous to 1886 under charge of City Engineer.*

NAME.	Year.
Bartholomew M. Young.....	1886 to 1889
James H. Nugent.....	1889 to 1891

## Bridge Department Before 1891.

NAME OF DOCUMENT.	For Year.	Pub. Year.	No. of Doc.
Annual report.....	1886	1887	29
" " .....	1887	1888	26
" " .....	1888	1889	29
" " .....	1889	1890	22
" " .....	1890	1891	*

\* Published in annual report, Executive Department, Part I., City Document No. 1, 1891.

## Lamp Department Before April 6, 1908.

SUPERINTENDENTS.	From	To
William Barnicoat.....	1854	Feb. 18, 1867
George H. Allen, Acting Superintendent.....	Feb. 19, 1867	April 1, 1867
George H. Allen.....	April 1, 1867	April 2, 1883
Hugh J. Toland.....	April 2, 1883	April 18, 1884
John T. Manson.....	April 18, 1884	April 6, 1885
Hugh J. Toland.....	April 6, 1885	May 1, 1889
George H. Allen.....	May 1, 1889	June 1, 1891
Patrick O'Shea.....	June 1, 1891	May 1, 1895
James Buckner.....	May 1, 1895	Oct. 1, 1896
James Donovan.....	Oct. 1, 1896	Mar. 1, 1900
Bertrand T. Wheeler, Acting Superinten- tendent.....	Mar. 1, 1900	Mar. 10, 1900
William D. Lang.....	Mar. 10, 1900	July 28, 1901
William Jackson, Acting Superintendent.....	July 28, 1901	Jan. 30, 1902
John Drohan.....	Jan. 30, 1902	Aug. 10, 1902
James Donovan, Acting Superintendent.....	Aug. 10, 1902	Jan. 3, 1906
Charles Logue, Acting Superintendent.....	Jan. 3, 1906	Feb. 28, 1906
Dennis J. Hern.....	Feb. 28, 1906	April 5, 1908
Edward C. Wade, Acting Superintendent.....	April 5, 1908	April 6, 1908

## Paving Department Before 1891.

NAME.	Year.
Enoch Patterson, Superintendent Streets and Drains.....	1825 to 1831
Zephaniah Sampson, " " "	1831 to 1846
Thomas Hunting, Superintendent.....	1846 to 1853
Alfred T. Turner, "	1853 to 1864
Charles Harris, "	1864 to 1883
Nehemiah T. Merritt, "	1883
James J. Flynn, "	1883
Charles Harris, "	1884
Michael Meehan, "	1884 to 1886
John W. McDonald, "	1886 to 1889
J. Edwin Jones, "	1889 to 1891

## Paving Department Before 1891.

NAME OF DOCUMENT.	For Year.	Pub. Year.	No. of Doc.
Quarterly report.....	1851		6
Annual report.....	1851		29
" "	1851	1852	2
" "	1852	1853	6
" "	1853	1854	6
" "	1854	1855	5
" "	1855	1856	3
" "	1856	1857	3
" "	1857	1858	3
" "	1858	1859	5
" "	1859	1860	6
" "	1860	1861	5
" "	1861	1862	4
" "	1862	1863	3
" "	1863	1864	3
" "	1864	1865	7
" "	1865	1866	3
" "	1866	1867	6
" "	1867	1868	9
" "	1868	1869	14
" "	1869	1870	13
" "	1870	1871	12
" "	1871	1872	16
" "	1872	1873	21
" "	1873	1874	25
" "	1874	1875	27
" "	1875	1876	30
" "	1876	1877	38
" "	1877	1878	29
" "	1878	1879	24
" "	1879	1880	24
" "	1880	1881	48
" "	1881	1882	51
" "	1882	1883	47
" "	1883	1884	46

Paving Department Before 1891.—*Concluded.*

NAME OF DOCUMENT.	For Year.	Pub. Year.	No. of Doc.
Annual report.....	1884	1885	97
" "	1885	1886	30
" "	1886	1887	16
" "	1887	1888	23
" "	1888	1889	30
" "	1889	1890	19
" "	1890	1891	*

\* Published in annual report, Executive Department, Part II., City Document No. 1, 1891.

## Sewer Department Before 1891.

NAME.	Year.
Enoch Patterson, Superintendent.....	1825 to 1831
Zephaniah Sampson, "	1831 to 1837
Charles B. Wells, "	1837 to 1856
Simeon B. Smith, "	1856 to 1863
William H. Bradley, "	1863 to 1883
Horace A. Moses, "	1883 to 1885
Thomas J. Young, "	1885 to 1887
Seth Perkins, "	1887 to 1889
Charles Morton, "	1889 to 1891

## Sewer Department Before 1891.

NAME OF DOCUMENT.	For Year.	Pub. Year.	No. of Doc.
Annual report.....	1859	1860	11
" "	1860	1861	12
" "	1861	1862	12
" "	1862	1863	13
" "	1863	1864	11
" "	1864	1865	5
" "	1865	1866	6
" "	1866	1867	8
" "	1867	1868	13
" "	1868	1869	11
" "	1869	1870	3
" "	1870	1871	11
" "	1871	1872	10
" "	1872	1873	13
" "	1873	1874	12
" "	1874	1875	17
" "	1875	1876	11
" "	1876	1877	13
" "	1877	1878	15
" "	1878	1879	11
" "	1879	1880	16

Sewer Department Before 1891.—*Concluded.*

NAME OF DOCUMENT.	For Year.	Pub. Year.	No. of Doc.
Annual report.....	1880	1881	19
" "	1881	1882	18
" "	1882	1883	16
" "	1883	1884	{
" "	1884	1885	43
" "	1885	1886	58
" "	1886	1887	69
" "	1887	1888	81
" "	1888	1889	129
" "	1889	1890	14
" "	1890	1891	*

\* Published in annual report, Executive Department, Part II., City Document No. 1, 1891.

## Health Department Before 1891.

*Sanitary.*

NAME.	Year.
Ezra Forristall, Superintendent.....	1853 to 1854
Joseph W. Coburn, "	1854 to 1855
Ezra Forristall, "	1855 to 1869
George W. Forristall, "	1869 to 1890

## Health Department Before 1891.

*Sanitary.*

NAME OF DOCUMENT.	For Year.	Pub. Year.	No. of Doc.
Annual report.....	1853	1854	7
" "	1854	1855	6
" "	1855	1856	4
" "	1856	1857	4
" "	1857	1858	4
" "	1858	1859	4
" "	1859	1860	5
" "	1860	1861	6
" "	1861	1862	5
" "	1862	1863	5
" "	1863	1864	4
" "	1864	1865	4
" "	1865	1866	8
" "	1866	1867	7
" "	1867	1868	8
" "	1868	1869	12
" "	1869	1870	4

**Health Department Before 1891.—Concluded.**

NAME OF DOCUMENT.	For Year.	Pub. Year.	No. of Doc.
Annual report.....	1870	1871	10
"      ".....	1871	1872	17
"      ".....	1872	1873	40
Annual reports from 1873 to 1884, inclusive; the superintendent's re- port was embodied in the report of the Board of Health.....	1885	1886	45
Annual report.....	1886	1887	22
"      ".....	1887	1888	16
"      ".....	1888	1889	23
"      ".....	1889	1890	21
"      ".....	1890	1891	*

\* Published in annual report, Executive Department, Part II., City Document No. 1, 1891.

**Commissioners of Cambridge Bridges Before 1891.**

(West Boston, Canal and Prison Point.)

NAME.	Year.
Frederick W. Lincoln, Commissioner for Boston....	May 22, 1871, to March, 1891.
Ezra Parmenter, Commissioner for Cambridge.....	June 14, 1871, to Jan. 31, 1883.
William J. Marvin, Commissioner for Cambridge ..	March 28, 1883, to 1891.

NOTE.—Harvard Bridge added in 1892. Essex Street, Cambridge Street, North Harvard Street and Western Avenue Bridges to Cambridge were transferred from Street Department July 1, 1898.

**Cambridge Bridges Before 1891.**

(West Boston, Canal and Prison Point.)

NAME OF DOCUMENT.	For Year.	Pub. Year.	No. of Doc.
Annual report.....	1871	1872	19
"      ".....	1872	1873	12
"      ".....	1873	1874	16
"      ".....	1874	1875	23
"      ".....	1875	1876	20
"      ".....	1876	1877	12
"      ".....	1877	1878	10
"      ".....	1878	1879	8
"      ".....	1879	1880	12
"      ".....	1880	1881	8

Cambridge Bridges Before 1891.—*Concluded.*

NAME OF DOCUMENT.	For Year.	Pub. Year.	No. of Doc.
Annual report.....	1881	1882	15
"    "	1882	1883	15
"    "	1883	1884	19
"    "	1884	1885	8
"    "	1885	1886	12
"    "	1886	1887	19
"    "	1887	1888	25
"    "	1888	1889	22
"    "	1889	1890	20
"    "	1890	1891	*

\* Published in annual report, Executive Department, Part I., City Document No. 1, 1891.

## Ferry Department Before 1895.

NAME.	Year.
Board of Ferry Directors.....	1870
William J. Burke, Superintendent.....	1891
Thomas Kellough.....	May 1, 1895
	July 1, 1895

## Ferry Department Before 1895.

NAME OF DOCUMENT.	For Year.	Pub. Year.	No. of Doc.
Annual report.....	1870	1871	41
"    "	1871	1872	55
"    "	1872	1873	81
"    "	1873	1874	42
"    "	1874	1875	65
"    "	1875	1876	51
"    "	1876	1877	53
"    "	1877	1878	49
"    "	1878	1879	60
"    "	1879	1880	74
"    "	1880	1881	77
"    "	1881	1882	72
"    "	1882	1883	93
"    "	1883	1884	76
"    "	1884	1885	72
"    "	1885	1886	28
"    "	1886	1887	12
"    "	1887	1888	10
"    "	1888	1889	3
"    "	1889	1890	4
"    "	1890	1891	*
"    "	1891	1892	12
"    "	1892	1893	11
"    "	1893	1894	11
"    "	1894	1895	11

\* Published in annual report, Executive Department, Part I., City Document No. 1, 1891.

## Street Department Since 1891.

*Superintendent.*

Henry H. Carter, member of American Society Civil Engineers.

*Resigned December 8, 1894.*

Charles R. Cutter, *Acting Superintendent from December 8, 1894, to January 14, 1895.*

Member of the Boston Society Civil Engineers.

Bertrand T. Wheeler, *Superintendent from January 14, 1895, to February 4, 1896.*

Member of the Boston Society Civil Engineers.

Benjamin W. Wells, *Superintendent from February 4, 1896, to February 1, 1900.*

Bertrand T. Wheeler, *Superintendent from February 2, 1900, to November 25, 1901.*

Member of the Boston Society Civil Engineers.

*Resigned November 25, 1901.*

William Jackson, *Acting Superintendent from November 25, 1901, to January 14, 1902.*

Member of American Society Civil Engineers.

Guy C. Emerson, *Deputy Superintendent in charge of the department from November 25, 1901, to January 14, 1902.*

Member of American Society Civil Engineers.

Member of the Boston Society Civil Engineers.

James Donovan, *Superintendent from January 14, 1902, to January 2, 1906.*

*Resigned January 2, 1906.*

Charles Logue, *Acting Superintendent from January 2, 1906, to February 28, 1906.*

James H. Doyle, *Superintendent from March 1, 1906, to January 6, 1908.*

*Resigned January 6, 1908.*

William Jackson, *Acting Superintendent from January 6, 1908, to April 13, 1908.*

Member of American Society Civil Engineers.

James H. Sullivan, *Executive Engineer in charge of the department from January 6, 1908, to April 13, 1908.*

Member of American Society Civil Engineers.

Member of Boston Society Civil Engineers.

Guy C. Emerson, *Superintendent from April 14, 1908, to June 7, 1910.*

*Resigned June 7, 1910.*

Member of American Society Civil Engineers.

Member of the Boston Society Civil Engineers.

Louis K. Rourke, *Superintendent from June 7, 1910, to the present time.*

Member of American Society Civil Engineers.

Member of Boston Society Civil Engineers.

BRIDGE DIVISION.—John A. McLaughlin, *Deputy Superintendent until June 1, 1895.*

BRIDGE DIVISION.—John P. Wise, *Deputy Superintendent from June 1, 1895, to February 14, 1896.*

BRIDGE DIVISION.—William H. Carberry, *Deputy Superintendent from February 14, 1896, to February 3, 1900.*

BRIDGE DIVISION.—Walter Reed, *Deputy Superintendent from February 3, 1900, to January 22, 1902.*

BRIDGE DIVISION.—Joseph P. Lomasney, *Deputy Superintendent from January 22, 1902, to December 30, 1905. Resigned December 30, 1905.*

BRIDGE DIVISION.—Peter O'Neil, *Acting Deputy Superintendent from December 30, 1905, to January 3, 1906.*

BRIDGE DIVISION.—Daniel J. Byrne, *Acting Deputy Superintendent from January 3, 1906, to February 28, 1906.*

BRIDGE DEPARTMENT.—Patrick F. McDonald, *Superintendent from March 1, 1906, to April 5, 1908.*

BRIDGE DEPARTMENT.—Thomas H. Sexton, *Acting Superintendent from April 5, 1908, to April 6, 1908.*

BRIDGE DIVISION.—Thomas H. Sexton, *Acting Deputy Superintendent from April 6, 1908, to July 17, 1908.*

**BRIDGE DIVISION.**—Thomas H. Sexton, *Deputy Superintendent from July 17, 1908, to February 1, 1909.*

Bridge Division consolidated with the Highway Division February 1, 1909.

**FERRY DIVISION.**—Thomas Kellough, *Deputy Superintendent from July 1, 1895, to February 14, 1896.*

**FERRY DIVISION.**—William F. McClellan, *Deputy Superintendent from February 14, 1896, to February 3, 1900.*

**FERRY DIVISION.**—Joseph J. Dennison, *Deputy Superintendent from February 3, 1900, to January 22, 1902.*

**FERRY DIVISION.**—William J. Donovan, *Deputy Superintendent from January 22, 1902, to January 3, 1906. Resigned. Acting Deputy Superintendent from January 3, 1906, to February 1, 1906.*

**FERRY DIVISION.**—Joseph F. Low, *Acting Deputy Superintendent from February 1, 1906, to May 14, 1906.*

**FERRY DIVISION.**—John J. Douglass, *Deputy Superintendent from May 14, 1906, to March 9, 1907.*

**FERRY DIVISION.**—James H. Sullivan, *Executive Engineer in charge of division from March 9, 1907, to January 20, 1908.*

**FERRY DIVISION.**—Henry P. Christiermin, *Deputy Superintendent from January 20, 1908, to the present time.*

**LAMP DIVISION.**—Edward C. Wade, *Acting Deputy Superintendent from April 6, 1908, to July 17, 1908,*

**LAMP DIVISION.**—Edward C. Wade, *Deputy Superintendent from July 17, 1908, to the present time.*

**PAVING DIVISION.**—Charles R. Cutter, *Deputy Superintendent until January 24, 1895.*

**PAVING DIVISION.**—Darius N. Payson, *Deputy Superintendent from January 24, 1895, to March 1, 1896.*

**PAVING DIVISION.**—John L. Kelly, *Deputy Superintendent from March 1, 1896, to February 3, 1900.*

**PAVING DIVISION.**—Darius N. Payson, *Deputy Superintendent from February 3, 1900, to January 24, 1902.*

**PAVING DIVISION.**—Joshua Atwood, 3d, *Acting Deputy Superintendent from January 24, 1902, to March 26, 1902.*

**PAVING DIVISION.**—Henry V. Macksey, *Deputy Superintendent from March 26, 1902, to December 2, 1905. Resigned December 2, 1905.*

\* **PAVING DIVISION.**—James H. Sullivan, *Acting Deputy Superintendent from December 2, 1905, to February 28, 1906.*

**PAVING DIVISION.**—James H. Sullivan, *Acting Deputy Superintendent from April 6, 1908, to July 17, 1908.*

**PAVING DIVISION.**—James H. Sullivan, *Deputy Superintendent from July 17, 1908, to the present time.*

Member of the Boston Society of Civil Engineers.

Member of American Society of Civil Engineers.

**SANITARY DIVISION.**—George W. Forristall,† *Deputy Superintendent.*

**SANITARY DIVISION.**—Philip A. Jackson, *Acting Deputy Superintendent from January 16, 1894, to February 1, 1895.*

**SANITARY DIVISION.**—Charles A. Young, *Deputy Superintendent from February 1, 1895, to March 1, 1896.*

**SANITARY DIVISION.**—Patrick O'Shea, *Deputy Superintendent from March 1, 1896, to February 3, 1900,*

\* For period from February 28, 1906, to April 6, 1908, see Street Department since 1891, page 488.

† Died January 12, 1894.

SANITARY DIVISION.— Charles A. Young, *Deputy Superintendent from February 3, 1900, to January 22, 1902.*

SANITARY DIVISION.— Daniel P. Sullivan, *Deputy Superintendent from January 22, 1902, to January 3, 1906. Resigned. Acting Deputy Superintendent from January 3, 1906, to March 1, 1906.*

SANITARY DEPARTMENT.— Daniel H. Gillespie, *Superintendent from March 1, 1906, to April 6, 1908.*

SANITARY DIVISION.— Daniel H. Gillespie, *Acting Deputy Superintendent from April 6 1908, to May 8, 1908.*

SANITARY DIVISION.— George H. Foss, *Acting Deputy Superintendent from May 8, 1908, to May 25, 1908.*

SANITARY DIVISION.— George H. Foss, *Deputy Superintendent from May 25, 1908, to the present time.*

SEWER DIVISION.— Henry W. Sanborn, *Deputy Superintendent until July 10, 1896.*  
Member of Philadelphia Society Civil Engineers.

SEWER DIVISION.— Charles R. Cutter, *Deputy Superintendent from July 10, 1896, to February 3, 1900.*  
Member of the Boston Society Civil Engineers.

SEWER DIVISION.— Guy C. Emerson, *Deputy Superintendent from February 3, 1900, to November 25, 1901, and from January 14 to January 22, 1902.*  
Member of American Society Civil Engineers.  
Member of the Boston Society Civil Engineers.

SEWER DIVISION.— Henry W. Sanborn, *Acting Deputy Superintendent from November 25, 1901, to January 14, 1902.*  
Member of Philadelphia Society Civil Engineers.

SEWER DIVISION.— George Phillips, *Deputy Superintendent from January 22, 1902, to January 3, 1906. Resigned.*

SEWER DIVISION.— George Phillips, *Acting Deputy Superintendent from January 3, 1906, to January 18, 1906.*

SEWER DIVISION.— Edgar S. Dorr, *Acting Deputy Superintendent from January 18, 1906, to March 1, 1906.*

SEWER DEPARTMENT.— John J. Leahy, *Superintendent from March 1, 1906, to January 10, 1908.*

SEWER DEPARTMENT.— Charles R. Cutter, *Acting Superintendent from January 13, 1901, to April 24, 1908.*

SEWER DIVISION.— Charles R. Cutter, *Acting Deputy Superintendent from April 24, 1908, to February 1, 1909.*

SEWER DIVISION.— C. Barton Pratt, *Deputy Superintendent from February 1, 1909, to August 17, 1910. Position abolished on above date.*

SEWER DIVISION.— Edgar S. Dorr, *Civil Engineer in charge of division from August 17, 1910, to the present time.*

STREET CLEANING DIVISION.— Philip A. Jackson, *Deputy Superintendent until March 22, 1895.*

STREET CLEANING DIVISION.— Benjamin M. Cram, *Deputy Superintendent from March 22, 1895, to March 1, 1896.*

STREET CLEANING DIVISION.— Joshua Atwood, 3d, *Deputy Superintendent from March 1, 1896, to February 3, 1900.*  
Member of the Boston Society Civil Engineers.

STREET CLEANING DIVISION.— Frank H. Haynes, *Deputy Superintendent from February 3, 1900, to April 16, 1901. Resigned April 16, 1901.*

STREET CLEANING DIVISION.— Frank C. Shepard, *Deputy Superintendent from April 16, 1901, to January 22, 1902.*

STREET CLEANING DIVISION.— Joseph J. Norton, *Deputy Superintendent from January 22, 1902, to January 3, 1906. Resigned. Acting Deputy Superintendent from January 3, 1906, to March 1, 1906,*

\* STREET CLEANING AND WATERING DEPARTMENT.— Matthew Cummings, *Superintendent from March 1, 1906, to January 16, 1908.*

Daniel H. Gillespie, *Acting Superintendent from January 16, 1908, to April 6, 1908. Acting Deputy Superintendent from April 6, 1908, to April 15, 1908.*

† STREET CLEANING AND WATERING DIVISION.— C. Barton Pratt, *Deputy Superintendent from April 15, 1908, to February 1, 1909.*

STREET WATERING DIVISION.— M. Edward Libby, *Deputy Superintendent from March 6, 1895, to March 1, 1896.*

STREET WATERING DIVISION.— Thomas J. Finneran, *Deputy Superintendent from March 1, 1896, to February 3, 1900.*

STREET WATERING DIVISION.— Frederick Hammond, *Deputy Superintendent from February 3, 1900, to January 22, 1902.*

\* STREET WATERING DIVISION.— Ambrose Woods, *Deputy Superintendent from January 22, 1902, to January 3, 1906. Resigned. Acting Deputy Superintendent from January 3, 1906, to March 1, 1906.*

BOSTON AND CAMBRIDGE BRIDGES.— Henry H. Carter, *ex officio, Commissioner for Boston, until December 8, 1894.*

Charles R. Cutter, *ex officio, Acting from December 8, 1894, to January 14, 1895.*

Bertrand T. Wheeler, *ex officio, from January 14, 1895, to February 4, 1896.*

Benjamin W. Wells, *from February 4, 1896, to February 2, 1900; ex officio, to May 26, 1898.‡*

Bertrand T. Wheeler, *from February 2, 1900, to November 25, 1901.*

Guy C. Emerson, *from November 25, 1901, to January 14, 1902.*

James Donovan, *from January 14, 1902, to October 28, 1904.*

Joseph P. Lomasney, *from October 28, 1904, to December 30, 1905.*

Peter O'Neil, *December 30, 1905, to January 3, 1906. Charles Logue, from January 3, 1906, to March 1, 1906.*

Patrick F. McDonald, *from March 1, 1906, to April 5, 1908.*

Thomas H. Sexton, *from April 5, 1908, to May 1, 1908.*

Guy C. Emerson, *from May 1, 1908, to June 7, 1910. Louis K. Rourke, from June 7, 1910, to the present time.*

William J. Marvin, *Commissioner for Cambridge to July 22, 1904.§*

George M. Clukas, *from July 26, 1904, to December 19, 1907.*

William H. Joyce, *from December 19, 1907, to April 17, 1909.*

Francis J. Smith, *from April 17, 1909, to the present time.*

\* March 1, 1906, Street Watering Division consolidated with the Street Cleaning Division under title of Street Cleaning and Watering Department.

† February 1, 1909, the Street Cleaning and Watering Division was consolidated with the Sanitary Division under title of Sanitary Division.

‡ See chapter 467, Acts of 1898.

§ Died July 22, 1904.

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